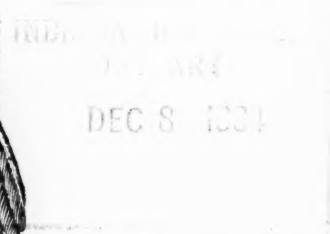


ce"
RS

Manufacturers Record

Reg. U. S. Patent Office



DECEMBER 1934

BALTIMORE, MD.

Sentiment is Better

Retail trade, exports and private building have improved.

Now let there be complete frankness on the part of government, and there will be a forward surge on the part of industry.

Confidence never will be complete in the face of ambiguity.

The Country Wants to be Told:

That government competition will stop and government spending be reduced.

That government intends equal rights to employer and employee.

That the dollar will not be further depreciated,

And reform must wait upon recovery

FURTHER EVIDENCE

THAT

WAR

*doesn't
pay!*



(Exact reproduction of an actual photograph)

Ordinary (*non-preformed*) wire rope is metallurgical proof that war doesn't pay.

In *non-preformed* wire rope there is constant, unceasing warfare between wires and strands. Unseen—but none the less there—locked in by twisted force. Indeed, so heavy and severe are the internal stresses and strains literally 30% of each wire's vital strength, energy and durability is wasted in a futile effort to untwist. . . . Yank the seizing from the end of an ordinary wire rope and you'll find this to be true, because once an end is free, the strands and wires explode like released clock-springs.

Thus eternal warfare between the wires and strands of *non-preformed* wire rope results in at least a 30% loss in wire rope service.

● In LAY-SET Preformed Wire Rope there is no internal warfare. . . . Because each wire and strand in LAY-SET is pre-formed, in manufacture, to the exact shape of the rope. LAY-SET is *relaxed* rope; a rope in which there is no twisted resistance—no internal tension, strain, or warfare.

Being preformed—being free from destructive internal stresses—LAY-SET resists kinking, resists twisting in the grooves of sheaves, requires no breaking-in, handles much easier, is easier to install, socket or splice, requires no seizing.

Preforming makes it possible for every single wire to give you its full measure of service. LAY-SET Preformed Wire Rope is busy working for you—not preoccupied with internal warfare. That's why LAY-SET gives so much longer, so much more satisfactory, so much more trouble-free service.

An interesting booklet containing complete information and proof of the superiority of LAY-SET Preformed Wire Rope will be sent on request.



UNRETOUCHED PHOTO OF ORDINARY WIRE ROPE



UNRETOUCHED PHOTO OF LAY-SET PREFORMED WIRE ROPE



HAZARD WIRE ROPE COMPANY

Wilkes-Barre, Pennsylvania

New York
Pittsburgh

Chicago
Denver

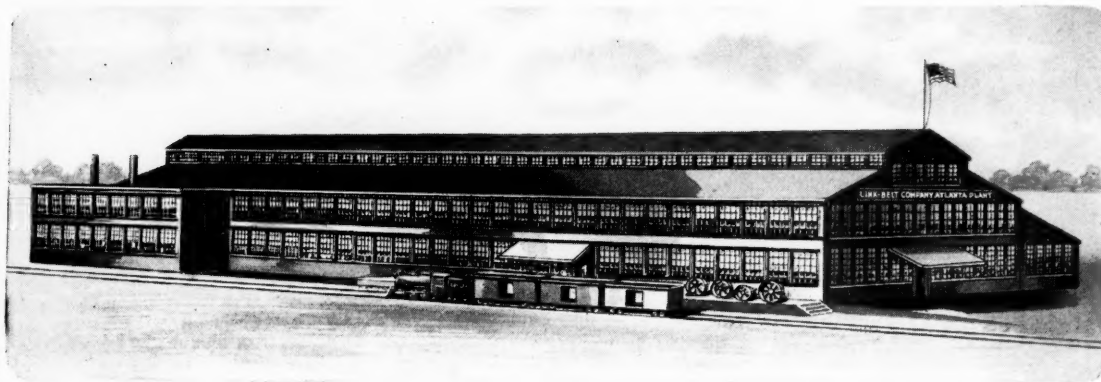
Fort Worth
Los Angeles

San Francisco
Birmingham

Philadelphia
Tacoma

LAY-SET *Preformed** Wire Rope

*PREFORMING IS A PATENTED
MANUFACTURING PROCESS APPLICABLE TO ANY TYPE, GRADE, CONSTRUCTION
AND LAY OF WIRE ROPE—WITH THE RESULT OF GREATLY INCREASING ITS SERVICE



LINK-BELT Acquires Bailey-Burruss Plant *Atlanta, Georgia*

AS evidence of our faith in the industries of the South, and in an endeavor to render them a broader and better service, we have recently acquired the plant of Bailey-Burruss Mfg. Co., which will from now on be known as Link-Belt Company, Atlanta Plant.

We have long maintained sales offices in such industrial centers as Baltimore, Atlanta, Louisville, New Orleans, Dallas, and recently augmented these facilities by establishing a warehouse in Dallas. The Atlanta plant binds us much more closely to the South by our actually becoming a part of its forward-looking industries.

It will also serve as a warehouse for both Link-Belt and Bailey-Burruss conveying and power transmitting equipment—sprocket wheels, bearings, collars, clutches, couplings, elevating and conveying chains, silent and roller chain drives, screw conveyor, etc.

The new organization will make every endeavor to render better service than either company has been able to give heretofore. For Conveying and Power Transmitting Machinery Service, address Link-Belt Company, 1116 Murphy Ave., S. W., Atlanta, Ga.

LINK-BELT COMPANY

5143

CHICAGO - PHILADELPHIA - INDIANAPOLIS - SAN FRANCISCO
BALTIMORE - ATLANTA - DALLAS
NEW ORLEANS - TORONTO



ARE YOUR FLOORS A HEADACHE?

- IF they are rutted or irregularly worn, it is very simple to make them smooth with **STONHARD RESURFACER** the internationally known floor repairing and resurfacing material.
- There is no need for tying up production.
- STONHARD RESURFACER** sets up ready for use in twenty hours.
- Thirty million square feet in actual use the world over in more than 10,000 of world's leading industrial plants, public utilities and railroad companies.
- IF your floors are dusting it's only an over-night job to stop this troublesome problem with **STONHARD CONCRETE FLOOR HARDENER**.
- It prevents disintegration, adds years to the life of the floor.

• SEND FOR FREE 26-PAGE BOOKLET "OVER THE ROUGH SPOTS"—it not only tells how to repair or resurface wood, wood-block, concrete, brick, asphalt or composition floors, but it deals with almost every building maintenance problem from roof to basement. Address request on your business letterhead to

STONHARD



COMPANY

401 NORTH BROAD STREET
PHILADELPHIA, PA.

America's Representative Industries and Railroads Use and Endorse STONHARD Materials

TABLE OF CONTENTS

**DECEMBER
1934**

Volume CIII No. 12

MANUFACTURERS RECORD

Devoted to the Upbuilding of the
Nation Through the Development
of the South and Southwest as the
Nation's Greatest Material Asset

Published Monthly

by the
**MANUFACTURERS RECORD
PUBLISHING CO.**
Frank Gould, President

Main Office: Manufacturers Record Building, Commerce
and Water Streets, Baltimore, Md.

Branch Offices:
New York—11 W. 42nd St.
Chicago—10 S. LaSalle St., Room 608

Subscription Rate: \$2.00 a year (in advance). Single
copies, 25c; back numbers, one to six months, 50c each;
over six months, \$1.00. Combination rate for Manufac-
turers Record and Daily Construction Bulletin, \$10.50
a year.

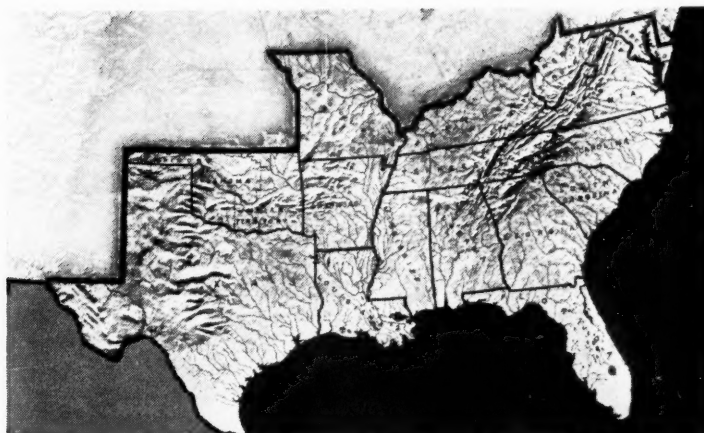
Subscribers are asked to notify us of change in
address to avoid delay in service.

**PUBLISHERS DAILY CONSTRUCTION BULLETIN AND
BLUE BOOK OF SOUTHERN PROGRESS**



Member
A.B.C.

DECEMBER NINETEEN THIRTY-FOUR



The South Has 31.8 Per Cent of the Land Area and 33.4 Per Cent of
the Population of the United States.

EDITORIALS

Sentiment Is Better	Cover Page
Remove Obstructions to Recovery	15
Subsidized Competition	16
Business Improvement	17

NEWS and FEATURE ARTICLES

Return to Democratic Principles...By Gov. Eugene Talmadge	18
Government Competition.....By George M. Verity	19
Reconstruction of Cotton Growing Industry	
By Harvie Jordan	20
\$5,000,000 in New Southern Office Buildings.....	22
Florida's Economic Advance.....By Howard L. Clark	24
Florida Development Possibilities.....By E. E. Callaway	25
Translating Faith Into Works.....By George Garner	28
Florida Foodstuffs	33
\$55,625,000 Construction Awards for November Set	
Monthly Record	34
Virginia Manufacturers Urge Abandonment of Destructive	
Government Practices	64
Retards Stable Business	64
Texas All-State Council Urges United Action.....	64
A Great Enterprise	68
Income Tax Deductions for Improvements.....	78

SPECIAL DEPARTMENTS

Iron, Steel and Metal Markets	42
Good Roads and Motor Transport	44
Equipment, New and Improved	46
Financial News	48
Over the Editor's Desk	52
Are You Aware?	54
Letters From Readers	58
Industrial News	60
Index for Buyers	78
Index of Advertisers	80

Bethlehem Sheets Contribute to Attractiveness of Knickerbocker Village Interiors

Knickerbocker Village brings solid values in livableness to a formerly blighted area of New York's lower East Side. Included among these values are fire-proof construction, abundance of light and air for every room, as well as the usual modern conveniences.

The attractive appearance of each one of the 1600 apartments in the project, appealing strongly to prospective tenants, had much to do with the rapidity with which the Knickerbocker Village apartments have been rented.

Here Bethlehem Sheets, used for door bucks, fire-proof apartment entrance doors, radiator covers and medicine cabinets, played a role of first importance. For Bethlehem Sheets have the excellent working qualities that make for accurate forming and an even surface, without evidences of grain distortion, to mar finished appearance.

In an application of such proportions this dependabil-



Airplane view of Knickerbocker Village, New York City. Fred F. French Co., General Contractors; John S. Van Wart, Architect.



Bethlehem Sheets were used for the door bucks of the development's 14,000 doorways.

ity in the inherent qualities of the sheets was put to the severest kind of test. Of doorways alone, requiring as many door bucks, there were 14,000. A total of 500 tons of Bethlehem sheets were used for all purposes.

Knickerbocker Village is but one of many large-scale jobs, involving severe tests, that have helped to establish the clear-cut superiority of Bethlehem Sheets.

BETHLEHEM STEEL COMPANY



District Offices: Atlanta, Baltimore, Boston, Bridgeport, Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Detroit, Houston, Indianapolis, Kansas City, Milwaukee, New York, Philadelphia, Pittsburgh, St. Louis, St. Paul, Washington, Wilkes-Barre, York. Pacific Coast Distributor: Pacific Coast Steel Corp., San Francisco, Seattle, Los Angeles, Portland, Honolulu. Export Distributor: Bethlehem Steel Export Corp., New York.

**TO MORE PROFITABLE
2-3 TON HAULING**

GENERAL MOTORS T-18

A Low-Priced All-Purpose Truck **\$675**

CHASSIS F.O.B. PONTIAC

For only a few dollars more than the lowest-priced 1½-ton trucks, you can own this quality-built GMC T-18 of ample capacity for the job. During its lifetime, its small extra cost will be saved several times over, through lower operating and upkeep costs.

This GMC T-18 is a big, husky, capable 2-3 ton producer. It will haul loads and maintain schedules in a way you wouldn't expect from lighter and cheaper trucks. Yet it carries no needless weight to eat up gas, oil and tire dollars.

Like all other General Motors Trucks, the T-18 is "engineered for the job." Its wheelbase lengths are longer — 140¾" and 164¾". Its weight distri-

bution conforms to S.A.E. standards. It has many outstanding design features, including heavier frame; full-floating rear axle with *straddle-mounted pinion* for maximum strength and longer life; stronger, drop-forged wheels; modern, centrifuge brake drums that save on upkeep; and a valve-in-head GMC engine whose higher sustained torque insures faster deliveries, more trips, greater profit. And best of all, this worker and earner is \$80 lower in price than the average of other trucks of comparable size.

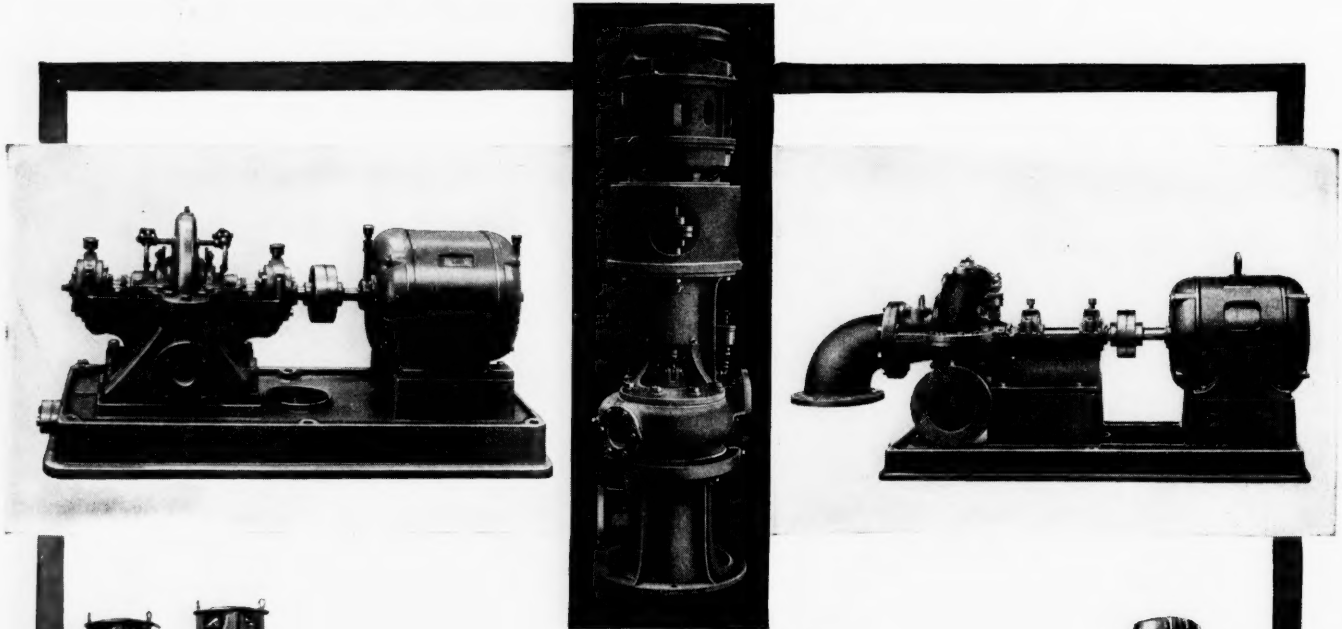
A General Motors Truck representative will be glad to supply additional information. A phone call will bring him to your place of business.

GENERAL MOTORS TRUCKS AND TRAILERS

GENERAL MOTORS TRUCK COMPANY

Time Payments Available Through Our Own Y. M. A. C.

PONTIAC, MICHIGAN



AMES PUMPS

Are particularly suited to sewage and water works service — the suitability of each type depending upon conditions of service.

All of these pumps, embodying the high qualities of Ames design, construction and workmanship, guarantee to water works and sewage engineers exceptional efficiency, accessibility and dependability — in other words, pumps that are **DISTINCTIVELY DIFFERENT.**

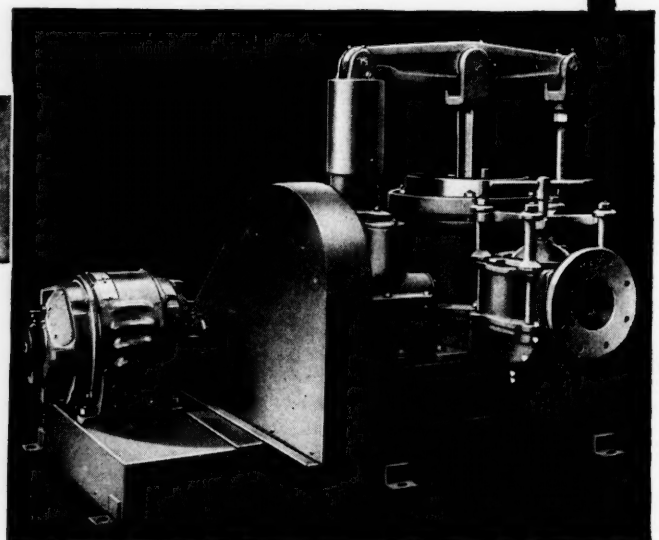
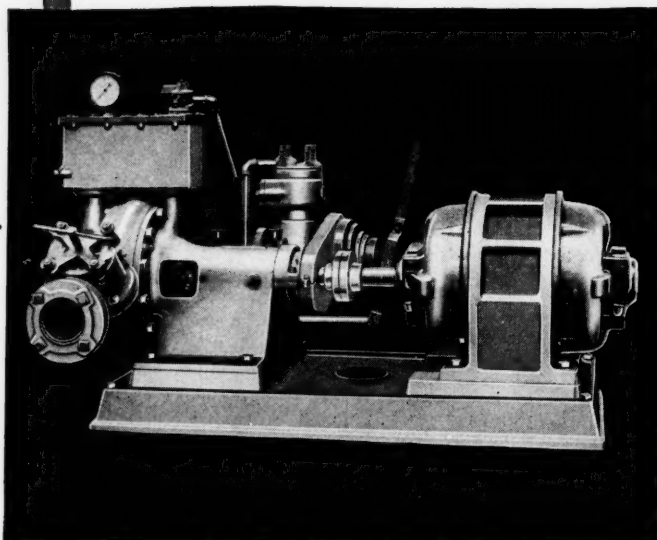


AMES PUMP COMPANY, INC.
30 CHURCH STREET • NEW YORK, N. Y.

Manufacturers of vacuum heating, condensate, centrifugal pumps, and fuel oil pumping-heating units

Division of American Locomotive Company

Representatives in all principal cities. Products manufactured and sold in Canada by Montreal Locomotive Works, Ltd.



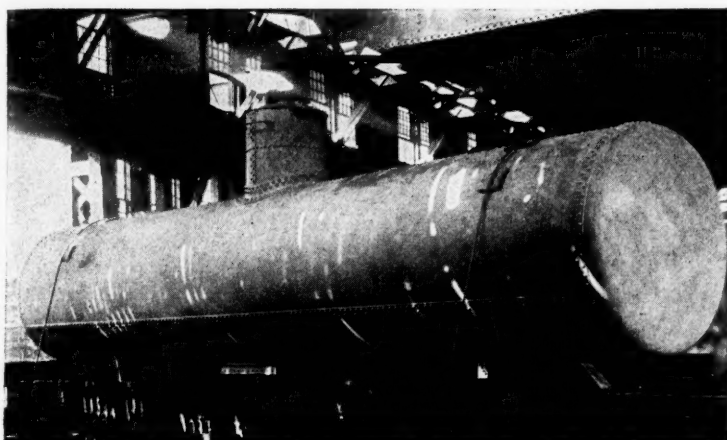
MANUFACTURERS RECORD FOR

PRESSURE VESSELS

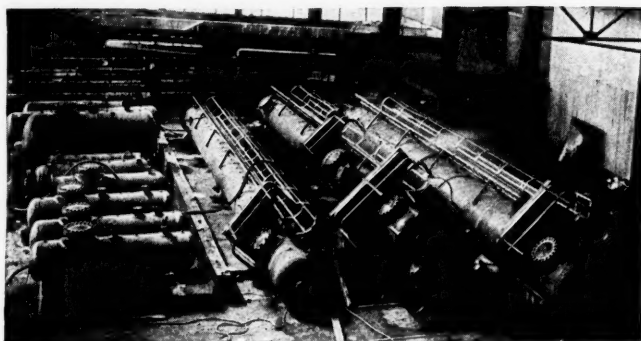
TANKS

DRUMS

TOWERS



Chrome Iron Tank for Tank Car



Group of Pressure Vessels for Export



Autoclaves for Chemical Processing

**WELDED
OR
RIVETED**

**FABRICATED
TO YOUR ORDER**

Fifty years of building pressure vessels has earned for our Hedges-Walsh-Weidner organization a very comprehensive knowledge of all the many problems involved in meeting every requirement of this work. You can entrust the construction of process equipment confidently to such an organization, with respect to design, fabrication, delivery and price.

Equipment fabricated to your order, of carbon steel, alloy steel or clad steel. Welded or riveted. All Class I fusion welding annealed, X-rayed and tested.

Complete facilities assure undivided responsibility.

Vessels to be fabricated may be any dimensions within shipping limits.

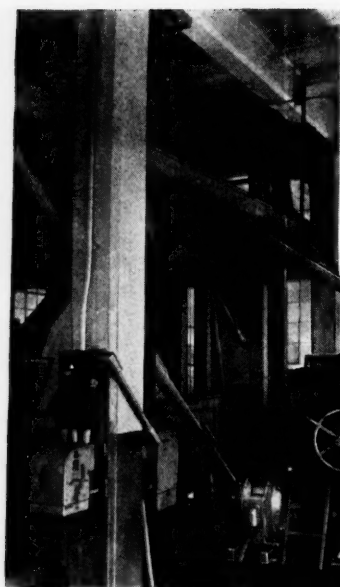
COMBUSTION ENGINEERING COMPANY, INC

200 Madison Avenue, New York, N. Y. . . . Canadian Associates, Combustion Engineering Corporation, Ltd., Montreal

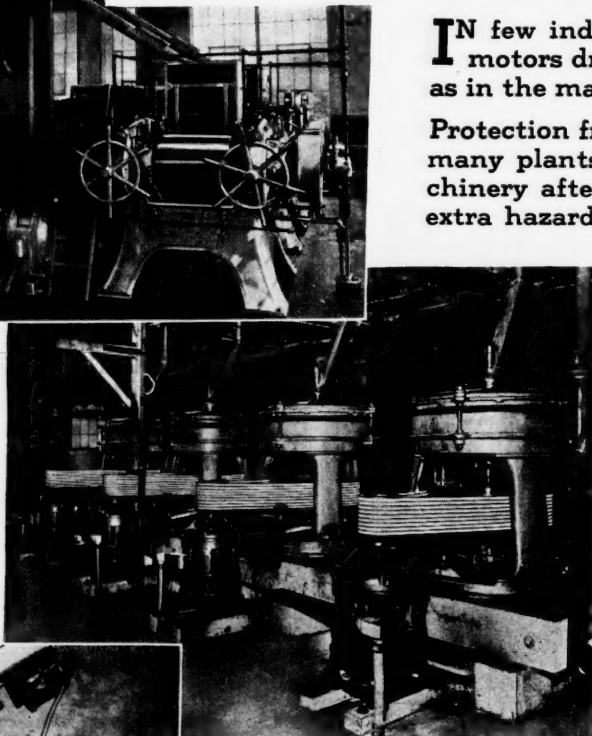
MANUFACTURING PLANTS: The Hedges-Walsh-Weidner Company, Chattanooga, Tenn.; Coshocton Iron Company, Monongahela, Pa.; Raymond Brothers Impact Pulverizer Company, Chicago, Illinois; Heine Boiler Company, St. Louis, Mo.

C-E PRODUCTS: Pressure Vessels, Fabricated Plate Work, All Types of Pulverized Fuel Systems, Mechanical Stokers, Boilers, Complete Steam Generating Units, Water Cooled Furnaces, Economizers and Air Heaters. A-199

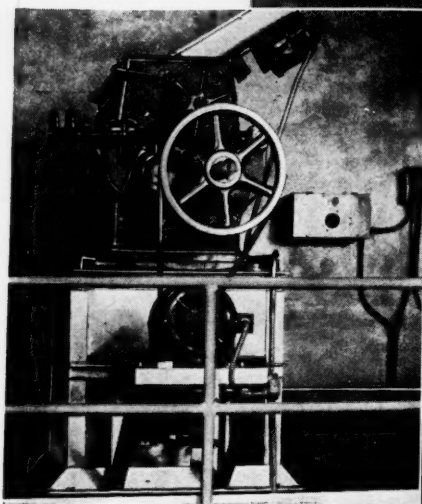
A Motor to Match every Food Industry Drive .. every Type of Application



Squirrel Cage Motors driving Allis-Chalmers Flaking Rolls in a Tennessee Cereal Plant.

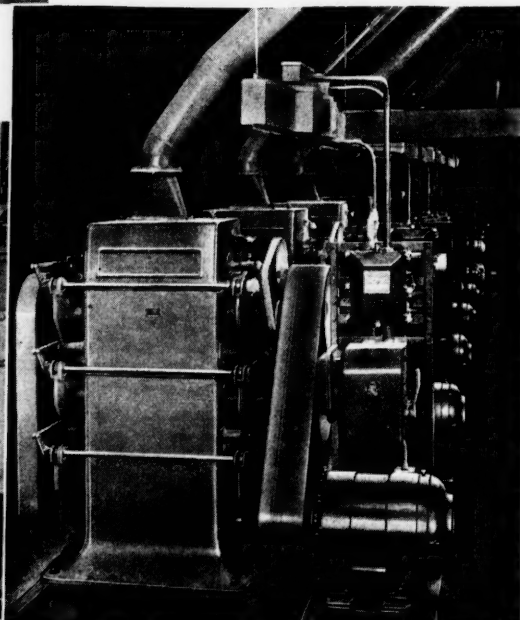
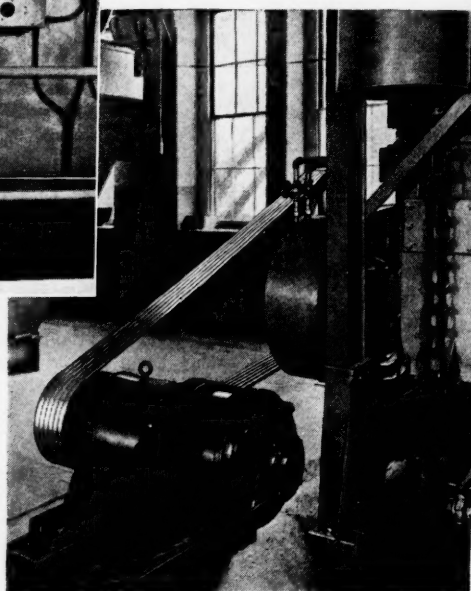


Vertical Motors driving Allis-Chalmers Under Runner Buhr Mills in an Indiana Starch Plant.



Driving an Allis-Chalmers Malt Crusher in a Milwaukee Brewery.

Gearmotor operating Rolls in a Chocolate Plant.

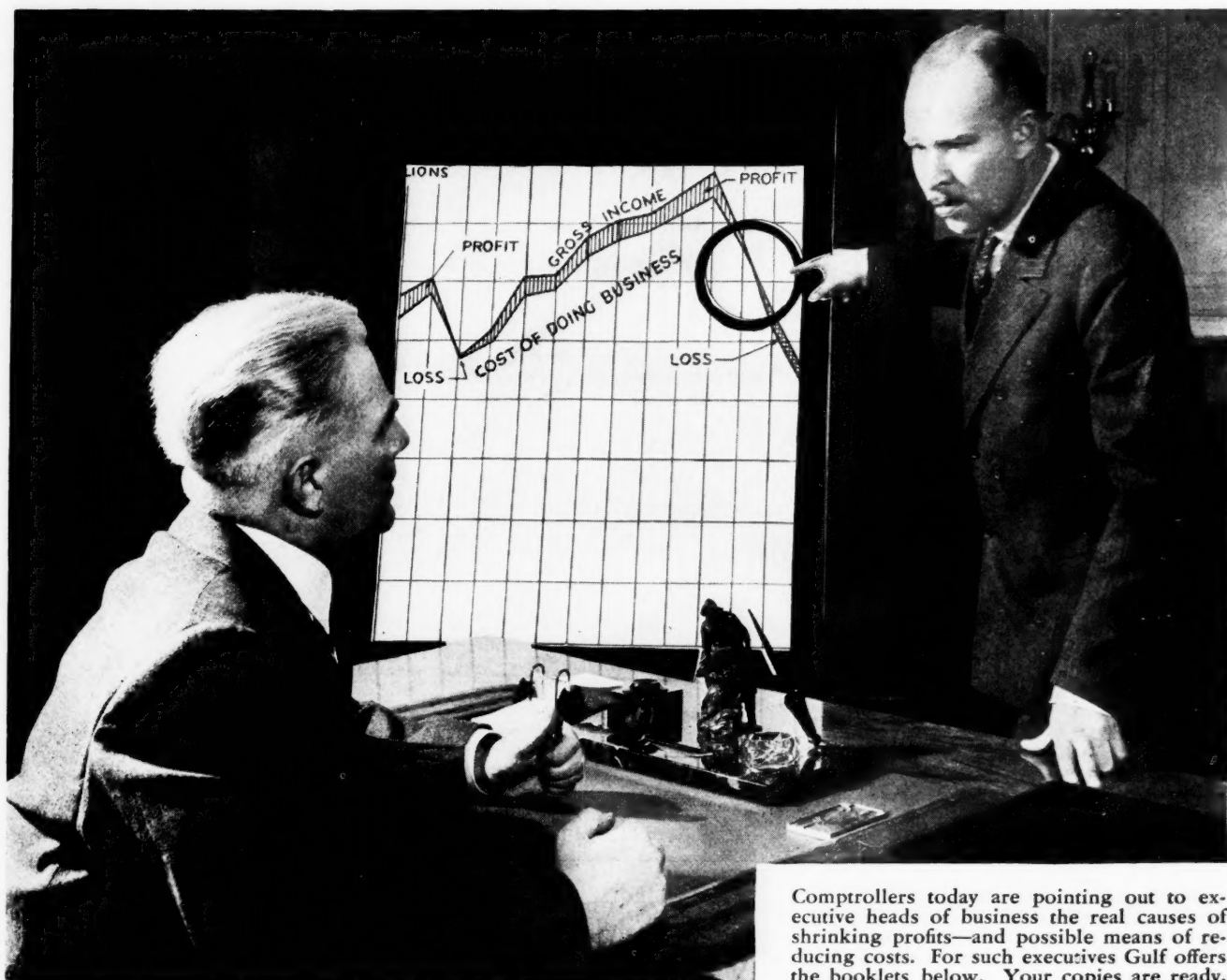


Enclosed Fan-Cooled Motors operating Allis-Chalmers Grinding Mills in a Peoria, Illinois, Distillery.

ALLIS-CHALMERS

— Allis-Chalmers Manufacturing Company, Milwaukee, Wisconsin, U.S.A. —

"CONSEQUENTLY, OUR PROFITS ARE BEING SQUEEZED OUT . . . HERE"



Comptrollers today are pointing out to executive heads of business the real causes of shrinking profits—and possible means of reducing costs. For such executives Gulf offers the booklets below. Your copies are ready.

Many Executives are finding Gulf Lubrication an Immediate Avenue to Substantial Savings

INDUSTRY faces the most trying problem in its history today. Competition is holding prices *down*. Outside influences are putting manufacturing costs *up*. Profits are in the "squeeze"—and many plants are running "in the red."

How can industry meet this emergency? Without one cent of additional capital outlay, your plant can *definitely reduce operating expenses* by putting Gulf's modern lubrication plan to work. Gulf has designed a scientific cost-cutting plan which can be successfully applied to plants of all types. We suggest that you investigate this easy way of reducing maintenance costs.



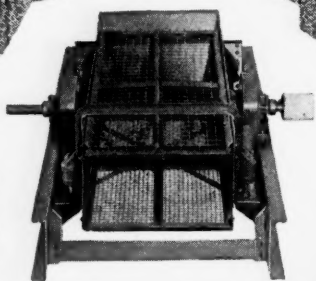
GULF REFINING COMPANY	M.R.-12
3800 Gulf Bldg., Pittsburgh, Pa.	
Please send me the booklets "Gulf's 7-Point Plan for Industrial Lubrication" and "Lubrication Cost Recording."	
Name.....	
Title.....	
Company.....	
Address.....	

"I have to use Gulf lubricants to be sure of dependable, low cost performance for my equipment," says Mr. F. A. McKenzie, owner, Atlantic Dredging & Construction Co., Lakeland, Fla. "We get lower power consumption, fewer bearing renewals by using Gulf," says Mr. Ralph Harrison, Mine Superintendent of the Keystone Coal & Coke Co. at Greensburg, Pa.

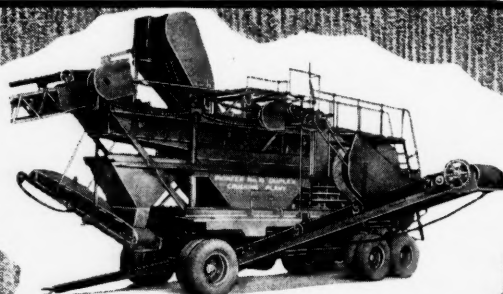
GULF REFINING COMPANY · PITTSBURGH, PA.

District Sales Offices:
 Boston New York Philadelphia Atlanta New Orleans
 Houston Pittsburgh Louisville Toledo

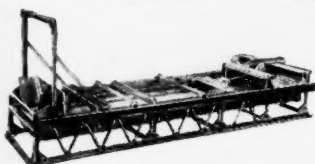




Vibrator Screen



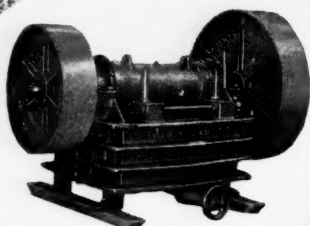
15 Duplex Crushing Plant



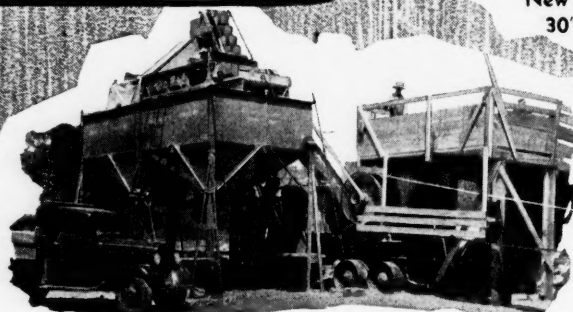
Shaker Screen



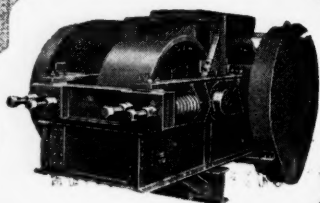
New Anti-Friction
30' Conveyor



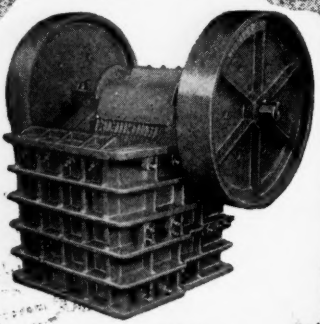
10 x 36 SKF Roller
Bearing Crusher



No. 245-R Crushing and Screening Plant



40 x 20 Roll
Crusher



24 x 36 Jaw
Crusher

PIONEER

offers modern equipment for pit and quarry,—sturdy all-steel jaw type SKF anti-friction Roller Bearing Crushers in ten different sizes; Timken anti-friction bearing Roll Crushers in five sizes; eccentric type Vibrator Screens, SKF bearing Shaker Screens and Revolving Screens; Conveyors and Conveyor Units; portable and semi-portable Screening, Crushing and Loading Plants, Washing Plants, plant units and designs for fixed plant operations.

Pioneer engineers in field and factory are ready to serve you, and to recommend the Pioneer equipment best suited to your job—*faster, cheaper and better.*

There is a Pioneer distributor near you.

Write us your requirements.

Pioneer Gravel Equipment Manufacturing Company

1515 Central Avenue

Minneapolis

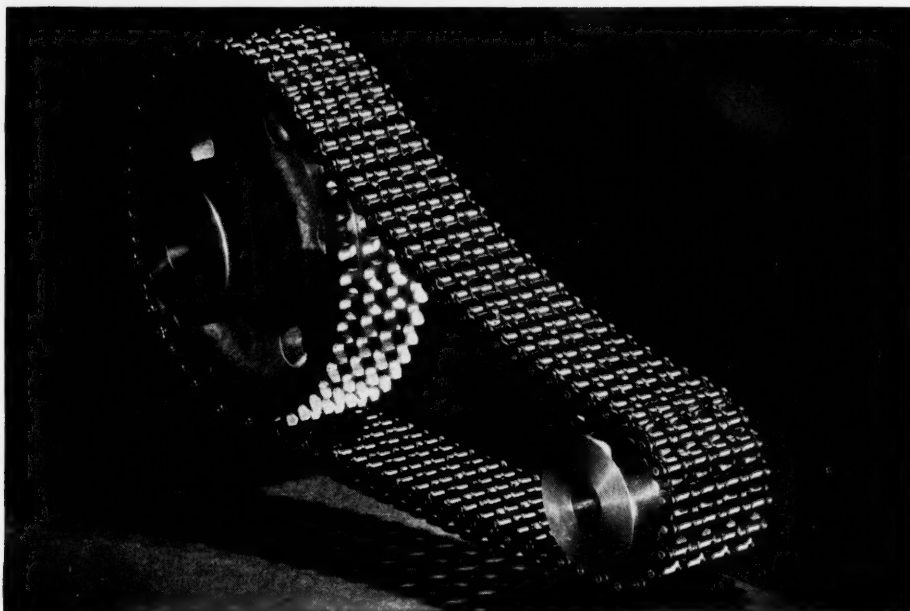
Minnesota

MANUFACTURERS RECORD FOR

REX

CHAIN

FOR EVERY DRIVE & CONVEYOR



for High Speed Drives REX ROLLER CHAIN

Rex makes a complete line of roller chains in single and multiple strands to meet the requirements of practically any high speed drive for plant or duplicate machinery application. These chains are available in standard sizes ready to ship from plant or branch stocks and nearby distributors.

Rex Roller Chains are made from specially selected steels. Each part is so accurately made that when the links are assembled, there is no room for play between the smooth, close-fitting parts, consequently play and wear are slow to

appear. This high degree of accuracy, plus high tensile strength and a high degree of finish, make Rex Roller Chains outstanding chains for high speed drives.

Block and leaf chains are also available.

All standard size sprockets are stocked for prompt shipment.

If you are unfamiliar with Rex Roller Chain drives and their application, Catalog 440, the most complete book on roller chain ever issued, will be sent to any engineer, operating official or executive.

CHAIN

BELT
COMPANY

1626 W. Bruce St.
Milwaukee, Wis.
Cable Address: Belchain

CHAIN & BELT CONVEYING

The South Needs Industry

The development of our country is intimately associated with the growth of its INDUSTRIES.

This Company will present during the coming year a series of articles in brief form dealing with achievements wrought by courageous, rugged individuals. Through the medium of INDUSTRY, they established communities, enriched States and built up the Nation.

While these articles may deal largely with the South, they apply as well to the entire country.

INDUSTRY BRINGS PROSPERITY

NEWPORT NEWS SHIPBUILDING AND DRY DOCK COMPANY

NEWPORT NEWS, VIRGINIA

• Manufacturers Record •

REMOVE OBSTRUCTIONS TO RECOVERY

GOVERNOR Eugene Talmadge of Georgia, in a notable article in this number, asks for the abolishment of the NRA which "defies every principle" of the Sherman Anti-Trust Law, "fixed the price of materials," fixed wages and hours of employment, limited production, and increased living costs.

He says, "Georgia guarantees to every citizen protection in his or her inalienable right to work. People have a right in Georgia to strike and people have a right in Georgia to work when they want to work."

His views, with which most business men will agree, are:

Drastic Government control of crop and industry production is retarding sound recovery.

Experimental legislation that will not work should be abandoned.

Charity, relief of the destitute and helpless, is a duty of the church and kindred organizations and should be one of their main activities.

"An army of people working for the Government," he points out, "necessitates the levying of taxes on everything. Business cannot stand heavy taxes and rebels from too much red tape and regulation. In Georgia, we have reduced taxes 20 per cent and the State Government has gone on with more effectiveness than it did before the reduction."

The Governor of Georgia strikes at Government practices which obstruct the efforts of business to co-operate in bringing about sound recovery without which there can be no permanent progress.

The scramble on the part of politicians, in both parties, to get on the New Deal band wagon at Washington evidently does not appeal to him. It does not appeal to the business men of the South.

In personal interviews and correspondence they express fear of an unknown future. They want the Chief Executive of the nation to speak more plainly on the monetary plans of Government.

Southern business organizations are urging the adoption of:

A stable monetary policy.

Abandonment of excessive Government expenditure.

Application of pledged economy in all Federal activities.

Abandonment of Government competition with private business.

Deliverance from partisan Governmental boards and influences which promote labor agitation.

Abandonment or drastic revision of section 7A.

Dependence upon Government is not the way for America to succeed. Governor Talmadge says: "If we want to keep the government honest, keep it poor. You either have a rich and powerful government and poor people, or you have a happy, prosperous people and a poor government."

Business wants to move forward, to make improvements in plant, to borrow and build and work harder than ever. It recognizes many of the mistakes of the days of false values, fevered speculation and watered securities. It has unbounded belief in the grit and greatness of America—greatness of resources and greatness of accomplishment.

Welcome encouragement is taken from the apparent change of attitude as expressed by some government spokesmen. Donald R. Richberg, Director of the Executive Council of the NRA, is on record with a new interpretation of Section 7A in the following:

"The choice of employee representation rests upon employees, and the dominant purpose of 7A is to protect individual liberty and voluntary collective action."

It is likewise encouraging that the Federal Emergency Relief Administration has announced the abandonment of the minimum hourly-wage scale of 30 cents and that hereafter local wage rates will prevail. The Georgia branch of the FERA will put into effect after January 1, the policy that all able-bodied men, recipients of FERA relief, will be put to work after the date named, or relief allowances will be withdrawn. Presumably this is to be carried out elsewhere.

But the march toward general progress will pause so long as there are ambiguous and conflicting statements from men in authority at Washington about government policies adopted and those to come.

The appeal of candidates for office in the recent elections was not economy, but more expenditures. How can the confidence and full cooperation of busi-

ness be gained if huge outlays that have failed in their purpose are kept up?

What encouragement to business is in the statement that projects similar to the TVA are to be extended to every State in the Union?

What encouragement to those dependent upon their investment in private utilities which have declined tremendously during the past year?

If recovery is to be advanced on broad substantial lines, it must be recognized that encouragement of private enterprise is the way to bring it about.

SUBSIDIZED COMPETITION

PRESIDENT Roosevelt, on his recent visit to the Tennessee Valley area, again expressed a desire to see the extension of similar government power projects into every State. To the people of the nation who believe in the development of private industry as the only sound way to recovery; to those who believe in safeguarding the rights of private property and protecting business and individuals against unfair competition, the announced purpose of the Government to expand its operation in the field of private business is one of the major factors retarding recovery.

Continued extension of Government competition in the electric light and power industry is destroying the value of investments in private utilities. As the Government has pushed its program, the decline in utility securities has been enormous. This affects millions of individuals, directly and indirectly, since banks and insurance companies are large holders of power stocks and bonds.

David E. Lillienthal, power director of the TVA, has asserted that "it is as useless to buck this economic tide as it is to seek to stop the tides of the sea." Of course it is a losing fight to preserve these private investments of individuals if the Government continues to set up plants and sell power below the cost of production. Private industry must operate under legitimate cost accounting practices that consider every item in the cost of production. They have no taxpayers money to draw on when they show a deficit. They must pay taxes whether they earn a profit or not.

No reasonable man wants to "buck" a sound economic advance, but facts are directly contrary to the theories that such an economic advance can be brought about by extending Government competition in the field of private business.

Wendell L. Willkie, president of the Commonwealth & Southern Corporation, representing \$600,000,000 of private property in the Southeast, particularly in the TVA region, declares "that the rates put into effect by the TVA in the 'yardstick area' do not fairly reflect the cost of energy to the Federal Government, nor to a private utility and, therefore, constitute an unfair comparison with the private utilities and a Federal subsidy to every user of electric energy in such area."

Specifically, Mr. Willkie pointed out that "The

Alabama Power Company had assets devoted to generation, transmission and distribution of electric energy at the close of 1933 of more than \$155,000,000. This roughly can be divided into \$90,000,000 in generating plants, and \$65,000,000 in transmission and distribution systems. The Alabama Power Company earned in 1933, after retirement charges and paying \$2,125,000 taxes to Federal, State, County and Municipal Governments, a total of \$7,832,000. After fixed charges of \$4,595,000 and preferred stock dividends of \$2,342,000, there remained a surplus of \$895,000.

"To apply the basic TVA rates, free from any surcharges, to the sales of the company for 1933 would have caused on the other hand a reduction of income of \$4,483,000.

"Thus, instead of having an earned surplus for the year, there would have been nothing for the preferred stockholders, and the company would have failed by \$1,245,000 to earn its bond interest. Honest investment of thousands of citizens, savings banks, insurance companies, educational and eleemosynary institutions, made in good faith and under State approval, would have been endangered, if not destroyed. A receivership for the company would have been inevitable.

"The inability of the company to inaugurate TVA rates is, therefore, plain since it does not have the benefit of Federal subsidies such as the TVA has. However, if it had the same subsidies it could actually reduce its rates below TVA rates."

Enumerating some of the advantages that TVA has over private industry, it is pointed out that the TVA does not include in its operating cost essential items that every legitimate private business must include in arriving at a fair price for its product or service.

First, it is shown that the Muscle Shoals hydro and steam plants cost \$60,000,000, but that it is proposed to write down this investment of taxpayers to about \$21,000,000, a 64 per cent depreciation charge off and arbitrary reduction in overhead cost. If the Alabama Power Company was given the funds with which to write down correspondingly its investment, Mr. Willkie says that it can pay off every one of its preferred stockholders, 37 per cent of its outstanding bonded debt and write down its capital accounts accordingly. Then the capital structure of municipal TVA operations would be on a more comparable basis with that of the company. But the Alabama Power Company cannot call on the taxpayers as the Government can and write down its investment.

Second, the TVA pays taxes of 5 per cent on the gross sales of power generated, or an average of two-tenths of a mill per kilowatt-hour compared with 1.52 mills a kilowatt-hour paid by the Alabama Power Company, or 7.5 times the rate paid by TVA. The application of the TVA tax rate to the company would reduce the company's taxes \$1,800,000 a year and of this amount the Alabama schools would lose \$1,000,000 annually.

Mr. Willkie also brought out the fact that not only was the TVA financed at low interest rates available to the Government but that overhead expenses, interest during construction, etc., costs every private business must include, are not charged against the projects. In addition, the TVA franks all of its bills, letters and advertising matter, etc.; and all freight hauled for the building of the projects is hauled at not to exceed two-thirds of the freight cost to a private company.

"Given the same subsidies," says Mr. Willkie, "we can immediately put into effect rates below those charged by the TVA."

BUSINESS IMPROVEMENT

PRESENT business conditions are better, measured in actual trade volume. Since the early part of October there has been continued improvement, with November activity reported the best for many months. Indications are that Christmas business will be greater than last year. The steel industry has been increasing operations for several weeks, following the drastic decline of the summer months, and at the end of November its production was above the rate of last year. Electric power output has increased. Production for the 11 months ending November was more than 76,000,000 kilowatt-hours, a gain of 6 and 9 per cent respectively over the same periods of 1933 and 1932, and almost equal to the production of 1931. In fact, the weekly electrical output of October and November has been greater than during the corresponding weeks of 1931. Total movement of revenue freight up to the middle of November amounted to 27,700,000 cars, about 2,000,000 more than in 1933 and 3,000,000 above 1932 carloadings during the same period. Bank deposits have greatly increased and bank clearings have gained.

Improvement has been marked especially in the South where 12 cent cotton and good prices for tobacco and other farm crops have enabled Southern farmers to make substantial payment on, or to pay off, long-standing debts and to spend new crop money for many things which they have done without for a long time. In 1932, the purchasing power of cotton farmers dropped to 50 per cent of the 1909-1914 average. This year cotton farmers' purchasing power is within 94 per cent of the pre-war average, a significant gain.

This has stimulated trade in all lines to the highest point reached in several years in many Southern centers. One of the effects of this is the South has made a greater percentage of gain in motor vehicle sales than the rest of the country. Registrations of new automobiles have increased 50 per cent and truck sales 68 per cent in the South this year compared with 1933.

General business improvement in the South is also reflected in increased construction. At the end of November contracts awarded in the South amounted to \$477,000,000 or 56 per cent more than the awards for new construction during the corresponding 11 months of 1933, and are in excess of the total construction lettings for any year since 1931. Included in the 1934 total is an increase in private construction that is most gratifying. Dwelling and apartment construction in the past two months increased in the South. Florida, especially, is experiencing a revival of home building, and as shown in a series of special articles beginning on page 24 of this issue, has made substantial gains in trade, and expects the greatest winter season in four years.

Many new industries have been established in the South. For 11 months of this year contracts awarded for new private industrial projects amounted to more than \$74,000,000, almost equal to the total for

the 12 months of 1933. In the past two years, therefore, there has been invested more than \$150,000,000 in new manufacturing plants in the Southern States. Despite billions being a familiar term of late \$150,000,000 is still a considerable sum of money and it cannot be expended for buildings and equipment without every field of business receiving benefit. The development of private manufacturing enterprises is of the greatest significance for it indicates a movement towards sound recovery.

The industrial development of the South during the past year has been of a diversified character, representing "smaller" manufacturing enterprises, although some of the great industrial concerns of the country have entered the South in the past 18 months and erected large plants. Four great chemical plants, totaling more than \$25,000,000, have been built or are nearing completion. The South is fast becoming the dominant chemical manufacturing region of the United States, as it has been prominent in cotton manufacturing, lumbering and other lines for many years.

In the recent successful experiment to manufacture newsprint paper from pine, it is now proven that the South can abundantly supply its own and the country's newsprint requirements. It has a potential capacity of 200,000,000 cords of pine pulpwood annually. Only 18,000,000 cords of pulpwood now furnish the raw material for all the newsprint made in the world. It is expected that announcement of the establishment in the South of a large paper mill will be made any day. In addition, the latest investigations in the uses of Southern pine indicate that super-cellulose can be made to supply the raw material for rayon making.

These examples of industrial progress in the South in the utilization of resources which the South has in abundance, are evidences of healthy growth. It has been made at a time of world-wide depression and when uncertainty and doubt as to the future have kept most business men timid about establishing new enterprises and expanding existing facilities. It forecasts great industrial activity for the South when the people regain their full measure of confidence and are willing to invest in more new undertakings.

Progress has been made, but in the light of certain disturbing factors it cannot be said that the South is entirely out of the depression. Fine as have been the gains made, the South, like the rest of the country, is still below what most of us consider normal activity. It is far below what can be expected under sound recovery. It is when comparison is made with the low periods of 1932 and 1933 that the present showing is so pronounced and encouraging.

Editorials and articles printed in the MANUFACTURERS RECORD are distributed frequently by business men to their acquaintances and friends. Extra copies, when desired, are furnished at a reasonable price, which covers only press work and paper.

RETURN TO DEMOCRATIC PRINCIPLES

By
Eugene Talmadge
Governor of Georgia

A FEW years ago, every newspaper and magazine in the United States was discussing the importance of the Sherman Anti-Trust Law. The necessity of breaking up coalitions of different business industries was recognized as the greatest protection of the people.

One article was written on how a few people could get together in a hotel room and impose a burden on the American people.

After the Sherman Anti-Trust Law was written on the statute books, thousands of prosecutions followed.

Why, even here in Georgia, when the oil mills had any kind of agreement about the price they would pay for cottonseed, all we had to do was to write the Department of Justice, and hundreds of thousands of dollars were spent in investigating as to whether or not they did have an agreement.

I attended some of these hearings, and was a witness. Everyone recognized that if the oil mills did have an agreement on what all of them would pay for cottonseed, it worked no good for the producer and consumer.

WHAT has become of the Sherman Anti-Trust Law?

The NRA defies every principle of this law. The NRA not only fixed the price of materials, but went so far as to fix wage scales.

The NRA went further than this—those in authority said that people could work only a certain length of time. They said, in some instances to work one group of employees three days and let them go, and then work another group three days.

The provisions of the NRA did not properly recognize training and skill on a job. They pushed in the unskilled and untrained to receive just as much as the ones with years of training on the same job. Some hodge-podge!

What is the result? It has caused hundreds of thousands of business enterprises to draw in their sails, and hire

fewer people. In a great many instances, concerns shut down entirely.

The quicker the NRA is abolished, the better off the people will be, the better off business will be, and the better off the government will be.

Let's go back to the Sherman Anti-Trust Law. If it is enforced, it will help the people.

IN Georgia, and all over the nation, we have spent millions of dollars in experiment stations and agricultural colleges, training our people to produce more. This idea is abandoned, and laws have been passed, stopping us from producing food and clothing.

The government had millions of pigs killed in America. They even offered a bounty to kill sows ready to farrow, and millions of these went to the slaughter pen.

Yet, the bread lines all over this country grow longer and longer with people who say they do not have enough to eat.

Last year, we produced 13,947,000 bales of cotton in the United States, and the farmer received an average price of 9.71 cents per pound, or a total income of \$633,000,000.

This year's crop has been reduced to about 9,600,000 bales with a value of \$612,000,000 at 12.75 cents per pound, which is somewhat above the average price received by the farmer.

This means that the total cash income of the Southern farmer is \$21,000,000 less than last year.

Yet, the NRA has advanced the cost of living, and we have less money in Georgia for our major money crop on which to live.

There are thousands of farmers in Georgia who are going to let some good, hard-working tenants and share croppers go if the Bankhead Bill is not abolished.

What will become of these farmers? Will they go on the relief rolls?

THE relief rolls in Georgia have grown in the past year to the staggering number of 412,977 to date.

On work projects, their minimum scale of wages has been 30 cents per hour for eight hours' work.

In Monroe County, Georgia, they were renting land, planting it in oats, working the plow hands eight hours a day, and paying them \$2.40 per day.

The adjoining neighbors who are not on the relief rolls, are plowing in oats and wheat, and their plow hands are being paid 75 cents per day.



Eugene Talmadge

It was not surprising that the relief rolls continued to grow, for you can't blame the 75-cent plow-hand from wanting to step across and get the \$2.40 per day.

But here's the pitiful part of it: The farmer who is still able to keep his land and hire that hand at 75 cents per day to work, had to pay his bit towards paying the man who worked for the government at \$2.40 per day.

The injustice of this has been recognized by the FERA which is abolishing the 30 cents an hour minimum rate, and henceforth the FERA wage scale will be based on the prevailing rates in the region where the work is being done.

CHARITY, relief, looking after the destitute and the unemployed, is a duty, and should be one of the main activities of our churches.

Just a few years ago, I remember that the pastor and members of the church would all look after the welfare of the community. If any persons could not get work, or were suffering, the matter was brought up in church, and a committee appointed to look after them.

The Community Chest, the Red Cross, the Salvation Army, all play their part in looking after the destitute and the helpless.

The \$3,000,000 spent in Georgia in November by the Federal Government will certainly cause our churches and charitable organizations to think. "Well, maybe there's nothing left for us to do."

WHEN it is necessary for a government to step in and give employment to its citizens, it should

undertake worthwhile projects. It should build for permanency, and while this work is going on it should pay a little less on the job than private industry is paying in the same community.

With a plan like this, the relief rolls would not grow. Private industry would not be smothered. The tax dollar would be used to help the people.

I remember well that Federal Administration leaders advocated a year or two ago the necessity for experimenting with legislation. At that time, they stated they would try something, and if it didn't work, they would abandon it and try something else.

I had faith in those statements, and the American people had faith in them. About the best help that we can give the government in Washington, and our President, is frank criticism on this experimental legislation.

BUSINESS cannot stand heavy taxes. Business rebels from too much red tape and regulations.

We don't need too much government. A vast army of people working for the government necessitates the levying of taxes on everything.

In Georgia, we have reduced the taxes 20 per cent, and the State Government has gone on with more effectiveness than it did before the reduction.

If you want a good job done, don't put too many people on it. They will get in the habit of loafing. Cut the number down to where it keeps them on their toes to do the work, and you will have a good job.

GEOORGIA guarantees to every citizen protection in his or her inalienable right to work. People have a right in Georgia to strike. People have a right in Georgia to work when they want to do so.

When anyone quits a job, he does not have the right to hang around the place of business and interfere with anyone else who wants to work on the job.

This fundamental principle is as true in Massachusetts, New York, and Illinois, as it is in Georgia.

IN Georgia, we believe if you want to keep a government honest, keep it poor.

You either have a rich and powerful government and poor people, or you have a happy, prosperous people and a poor government.

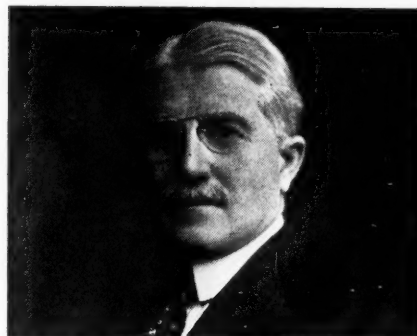
Reprints of articles published in the MANUFACTURERS RECORD are available at reasonable cost.

GOVERNMENT COMPETITION

By

George M. Verity

Chairman, The American Rolling Mill Co.



George M. Verity

THE introduction of a bill by Senator Bennett Champ Clark and Congressman Joseph B. Shannon to provide sound government cost accounting, should have the full support of all business enterprise.

American commerce and industry have had many obstacles to overcome in their struggle to attain their present commanding position after a century of development.

While discouragement in the meeting and overcoming of all of these difficulties was never permitted to gain any worthwhile ascendancy, it was never dreamed that at some future time business would have to face its own Government, its long established protector, as a great and often unfair competitor.

The movement towards the entry of government in the various fields of business enterprise where private capital is and has been largely invested successfully, which began as an emergency measure and was later advocated as in the interest of society as a whole, has assumed alarming proportions. This movement, no matter how or by whom started or supported, has such far-reaching and serious possibilities that it deserves the immediate and serious consideration of both business and the individual citizen in whose interest the cost accounting legislation referred to is recommended.

The whole economic structure of the nation is based on the soundness and effectiveness of private enterprise.

The function of government is to encourage individual initiative and enterprise and protect the rights of its citizens. Government competition in any field of effort rightly occupied by private enterprise does neither.

The Civil War was fought on the principle that no nation could remain half slave and half free. By this same token this nation can not continue a democratic form of free government with private enterprise having to compete with its own government.

Any commodity produced with Federal funds and sold to the public on terms not possible to be met by well managed private enterprise, will in the end cost the nation more than it has saved the group so served, as every worker and investor in the nation would either directly or indirectly have to contribute to the cost of that commodity.

The whole procedure is absolutely unsound economics and mistaken policy.

It is affirmed that there is no correct system of record of costs kept in competing government enterprise, so that even the government itself can not estimate the harm it is doing to its citizens.

Certainly there can be no legitimate objections to the installation and use of the best established methods of cost accounting so that government records will show clearly just what its venture into competing activities means to the nation.

All of the strength of the government and all of the power of our citizens are now being concentrated on plans and programs for sound and permanent economic recovery. There can be nothing more discouraging to private enterprise, to capital, or to the individual than the knowledge that any considerable part of the funds provided by government borrowing are being used to break down the effort that must be made by every organized group engaged in any business enterprise, if any recovery worthy of the name is to be enjoyed.

Our government is of necessity now engaged in many mammoth ventures. All of them intended to bring a return to normal living, a revival of a normal national income, and to create a better ordered social structure.

The first great emergency created by the long-drawn-out depression is, however, passed and there is now opportunity for the government to provide better coordination between all of these great enterprises to the end that the operation of one may not destroy the value of others. Any other method of procedure is futile and can only end in disaster too great to contemplate.

Senator Clark and Congressman Shannon are to be heartily commended for their interest and their devotion to a procedure which will correct this unfortunate mistake and possibly prevent serious disaster.

RECONSTRUCTION OF COTTON GROWING INDUSTRY

By
Harvie Jordan
Atlanta, Ga.

AFTER two years of practically compulsory control of the cotton growing industry in the south by the Federal Farm Administration under various heretofore untried experiments, it might be well to take stock of the situation and analyze the results obtained from the formulas adopted.

By voluntary cooperation with the cotton growers the Federal Cotton Control Administration succeeded in its campaign to plow up and destroy 10,000,000 acres of growing cotton in June and July of 1933, for the purpose of reducing an abnormal surplus of American cotton whose weight upon the markets depressed values for the staple below the cost of production.

For the loss of the area planted and plowed up the Government paid the growers satisfactory cash rental benefits. The effect of plowing up an estimated 25 per cent of the total area planted in cotton at once stimulated the market and prices for the lint promptly advanced to 9 cents per pound or an increase of 50 per cent in values.

A further allowance of 4-cents per pound on unsold pooled cotton in the

The author of this article is a widely known cotton grower and a recognized authority on Southern farming. As managing director of the American Cotton Association and Better Farming Campaign, he has been a leader in advocating the adoption of improved cultural methods and more widespread diversification of food and feed crops as imperative in any sound economic rehabilitation of Southern agriculture.

hands of the farmers and also loans at 10 cents per pound on cotton bales stored to induce a slower movement of the staple to market, were further beneficiaries to the cotton growers of the south, and tended to steady and influence better prices.

In 1934 with continued voluntary support of the growers the planted acreage in cotton was reduced to 27,371,000 acres, or practically 30 per cent less than the acreage originally planted in 1933. Acreage rental benefits for the abandoned cotton acreage were continued by the Federal Farm Administration amounting to many millions of dollars distributed among the growers.

Heavy reduction in the cotton acreage planted in 1934, further stimulated demand for the staple and market values steadily advanced to 12½ cents per pound, basis midling, 7/8 inch fibre, or an increase of 100 per cent in prices above the spring months of 1933.

As the marketing period of the 1934 crop was reached, estimated at 9,450,000 bales, the Federal Farm Administration increased the loan value on cotton bales unsold by the farmers to 12 cents per pound, the government guaranteeing any losses in prices below the minimum loan values.

In connection with the reduced cotton acreage campaign farmers were urged to expand food and feed crops, plant legumes to improve the natural fertility of their depleted soils and practice diversification to insure a self-sustaining system of agriculture.

These re-constructive measures for farm relief under the administration of the New Deal have been of very great economic value to the cotton growers of the south, stimulating hope and encouragement for the future.

Bankhead Cotton Control Law

The "Fly in the ointment" of Federal farm relief measures for the cotton growers is found in the drastic compulsory provisions of the Bankhead Cotton Control measure enacted by Congress last May and enforced against the 1934 crop.

This experiment is subject to constructive criticism as its application and enforcement strikes a severe blow to efficient farming in crop culture. No doubt the intent of the framers of the measure felt that the compulsory enforcement of the law would be a beneficial factor in scaling down the abnormal surplus of raw cotton and become a valued agency in advancing the price of cotton to higher prices in the interest of the growers.

The proponents of the Bankhead law however, appear to have had no practical knowledge or experience of the essential requirements in conducting farming operations for profit. Penalizing by restriction or taxes of acreage production of cotton, or any other crop, means a check on efficient farm practices by the industrious or more successful farmers.

Farming is not different from any other business or industry. If the overhead operating expenses exceed the gross income of the business, failure is certain. The only possible hope for the cotton farmers to secure a profit on their industry is to produce acre yields on

Growing 508 Pounds Lint Cotton Per Acre
10-acre demonstration in proper cultivation of full-inch staple cotton near Carrollton, Ga.



crops planted whose market values exceed the economic cost of production.

This calls for intensive culture on a more restricted acreage in cultivation directed by efficient farm management. Fixing quotas of acreage production by law based upon low average yields of cotton per acre over a series of years by counties and states result in placing all farmers upon a common level of inefficiency and will destroy the incentive for more economic and better methods of farming, of which the south is so badly in need.

The quotas of free sale cotton in the south-eastern cotton states where farmers had been materially decreasing their cotton acreage for the past 15 years, were in many instances so small as to render one horse farmers unable to pay their most economic operating expenses, the quotas not exceeding one bale per plow. This has proven distressing to a large number of small farmers.

As a matter of fact the south will produce a million bales of cotton less than the fixed allotment of free sale cotton under the Bankhead law, the reduced production being chargeable to heavy curtailment in cotton acreage planted and unusual adverse weather conditions, forecasting the shortest crop in 30 years, except in 1921. The Bankhead law has had no effect in advancing the price of cotton.

If there must be compulsion to prevent the excessive production of cotton, let it apply to a restriction of the acreage planted, which can be applied and enforced with just equality against every cotton farm in the south.

Continued enforcement of the Bankhead law will prove disastrous in penalizing acreage production as it will destroy the only method of farming for profit.

Intensive Culture of Cotton

Aside from India, the south produces less lint cotton per acre than any other cotton growing country in the world. The very low average acre yields of lint cotton in this country will not insure to the growers a reasonable profit at less than 15 to 20 cents per pound for the staple.

These continued low acre yields are due to planting an excessive acreage in cotton, limited fertilization, inefficient cultural methods and an absence of any well defined system of crop rotation and planting legumes to improve the natural fertility of the soils.

There are thousands of efficient growers who produce an average yield of 350 to 500 pounds of lint cotton per acre and whose farming operations are made profitable under a diversified system of sound and sane farm practice. But the vast majority of the growers are subjected to the experiences of depressed

Condensed Crop Report on an "Intensive Culture" Demonstration of a Farmer-Operator Under A. C. A.

Better Farming Campaign.

Cotton Demonstration—8-acres
Land broken deep, broadcast and harrowed.

Planted full inch staple seed April 10th.

300-lbs. high grade fertilizer per acre at planting.

100-lbs. sulph. of ammonia in furrows per acre June 20th.

Crop plowed over 10 times in cultivation.

Harvested seed cotton...14,234 lbs.

Ginned lint cotton 5,334 lbs.

Ginned seed 8,894 lbs.

Total sales of lint and seed \$835.84

Total cost of production 235.50

Total net profit 8-acres \$600.34

Lint yield per acre 687 lbs.

Corn Demonstration—6-acres

Land broken deep and harrowed. Planted April 22nd, Mosby Prolific.

300-lbs. 15-4 phosphate potash mixture per acre at planting.

100-lbs. sulph. of ammonia side furrows June 17th per acre.

Plowed the crop 5 times cultivating.

Harvested 300 bushels

Market value corn and fodder \$315.00

Total cost of production .. \$1.40

Net profit 6 acres \$233.60

Yield per acre 50 bushels.

The above yields of cotton per acre compare with an average yield of lint in the South of 165 lbs. per acre. In corn the yields compare with an average acre yield in the South of 12 bushels.

financial living conditions because of their adherence to uneconomic methods of farming and inefficient farming operations.

The south-wide Better Farming Campaign which I inaugurated and have operated for the past 12 years as Managing Director, under the intensive system of culture, has fully proven that high acre yields guarantee profitable results to the growers.

The average annual yields of lint cotton per acre has been one bale or more among selected farmers in counties of ten cotton states from North Carolina to Texas. Many of the farmer members produce from 2 to 2½ bales per acre, indicating high efficiency in the methods of culture employed which shows the possibilities of southern soils and climate to meet successfully and overcome any competition in the economic production of cotton by any other country.

The highest acre yields of other staple farm crops such as corn and wheat grown in the United States are also

produced under this well defined system of intensive culture on a restricted acreage planted per farm.

Our member farmers are also planting selected cotton seed of full inch to 1½ inch staple length to improve the lint fibre in accordance with the modern demands of textile mills.

It may well be asserted that the world will never pay an artificially high price for any commodity to insure a profit on inefficient and uneconomic production. Twenty years ago the south produced 70 per cent of the raw cotton of the world and enjoyed a monopoly in growing and distributing the staple for clothing to the hundreds of millions of the civilized population in all countries.

At present American cotton supplies less than 50 per cent of the world textile demand for the staple. Other countries are rapidly expanding their cotton acreage, planting improved seed of longer staple and materially increasing their supplies of raw cotton to foreign textile mills, thereby successfully competing with American growers.

Raw cotton is the only large money income crop which the south can grow for inter-state and foreign marketing without entering into active competition with every other state in the nation, and due to this fact, cotton must continue to remain the chief money crop of the south. Exports of American cotton is being seriously curtailed because of foreign competition.

Economic Solution of Problem

The south can regain and maintain its monopoly of the world cotton growing industry if more economic methods in production are adopted and applied by the growers throughout the cotton growing states, along the following well defined and proven methods of farm operation:—

First—Plant not exceeding one-third of the cultivated land on each cotton farm in cotton, under voluntary cooperation with the Federal Farm Administration or by compulsory Federal law. Plant the other two-thirds of the cultivated land in food, feed and legume crops under a systematic adoption of crop rotation for farm maintenance and to rebuild the natural fertility of the soils. A large acreage in cotton presupposes a large crop and at once becomes a depressant factor on the market regardless of seasons or final harvesting. The speculative and cotton buying trade are now anticipating a very material increase in the cotton acreage for 1935, and this general sentiment is adversely affecting the present and future prices for the staple.

Second—Adopt and apply with efficiency the intensive system of culture on every farm, which means thorough
(Continued on page 66)

\$5,000,000 IN NEW SOUTHERN OFFICE BUILDINGS

CONSTRUCTION of new office buildings, additions and improvements to major structures in the South, already under way or soon to be placed under contract, will involve \$5,000,000.

AIR conditioning features improvements to existing office structures as shown in the following summary in which 6 of the 10 projects listed, have air conditioning equipment definitely specified. Some buildings now being air conditioned have only been built within the past few years.

Office structures recently let to contract and proposed for early starting are all designed for air conditioning installation to be taken up with plumbing, wiring and other sub-contracts.

New elevators are meeting a demand for quiet operation, safety and speed. The most recently planned buildings will have elevators that operate almost noiselessly, with doors that open and close with clock-like precision, with highly improved signal devices and with self-leveling machinery. The power is supplied by heavy duty motors capable of quick acceleration and high speeds.

The improvements being made to older buildings require, in some instances, extensive structural changes, stouter supports, new partitions and penthouses for operating machinery, particularly for elevator motors and air conditioning equipment.

In addition to the major projects now going forward and proposed there is an increased number of projects through the entire South for less extensive renovation work on office structures. Such projects not only provide work locally for building tradesmen and contractors, but stimulate employment in all parts of the country, creating a demand for a diversified line of supplies and machinery.

In many offices sprinkler systems are being installed to insure lower insurance rates. Lighting engineers are brought in to plan for scientifically direct lighting conditions, frequently requiring new fixtures and in many cases extensive wiring system changes.

Plumbing fixtures are being renovated and improved. Floors, corridors and sidewalks are being repaired, adding to the attractiveness and serviceability of the buildings. Tile, linoleum, terrazzo and composition materials are being widely used for this work. Roofs are being repaired, with large sums in the aggregate going into the reconditioning of cornices and rain water disposal systems.

Present activity marks an improvement in the field of private construction.



17 Story Addition
Humble Oil & Refining Company's Office Building, Houston, Tex.

will be laid in the floors. Pneumatic tubes will connect the waiting rooms on each floor and all rooms insulated to diminish noise. The McClintic-Marshall Corporation of Bethlehem, Pa., was awarded the contract for the structural steel.

Texas, Dallas—Gulf States Security Life Insurance Company. 6-story addition to present 10-story building under way. New section to be ready for occupancy next year before summer.

Architects—Lang and Witchell, Dallas.
Mechanical Engineer in charge Air Conditioning Work—Chas. L. Kribs, Jr., Dallas.

Light, spacious corridors with rubber tiled floors are planned for each story. The building entrance is to be re-finished with Italian marble. Bronze marquise will be placed over the entrance doorways. The lobby will be remodeled in Carthage marble and will include a decorative inverted lighting system. The building will be air conditioned and three high speed automatic control elevators will be installed.

Missouri, St. Louis—Monsanto Chemical Company. Two sections of 3 and 6 stories each, 52 by 54 feet and 140 by 55 feet, respectively. Cost—\$250,000.

Architects—Mauran, Russell & Crowell, St. Louis, Mo.

Structural Engineer—R. A. Volk, St. Louis.

Electrical Engineer—H. H. Morrison, St. Louis.

General Contractors—Stone & Webster Engineering Corporation, St. Louis.

Built of brick and reinforced concrete.

Texas, Houston—Humble Oil & Refining Company. 17-story addition to present 9-story office under way. Cost—\$750,000.

Architect—John F. Staub and Kenneth Franzheim, Houston.

General Contractor—American Construction Company, Houston.

Designed to "look cool, inviting and uncrowded," the building—14 stories and a 3-story tower—is a modern adaptation of Italian Renaissance and will be connected to the present offices by a

10-story addition with a width of 80 feet on the first floor and 50 feet above. The exterior is face brick, cut stone trim and steel sash. The corridors will have marble wainscoting and terrazzo floors. Its construction will provide work over a period of a year for 250 to 300 men. Four high speed elevators will be installed and the building will be air conditioned throughout, the cooling system placed in the 3-story tower. Electric lights and telephone conduits where they may be tapped for all desk connections

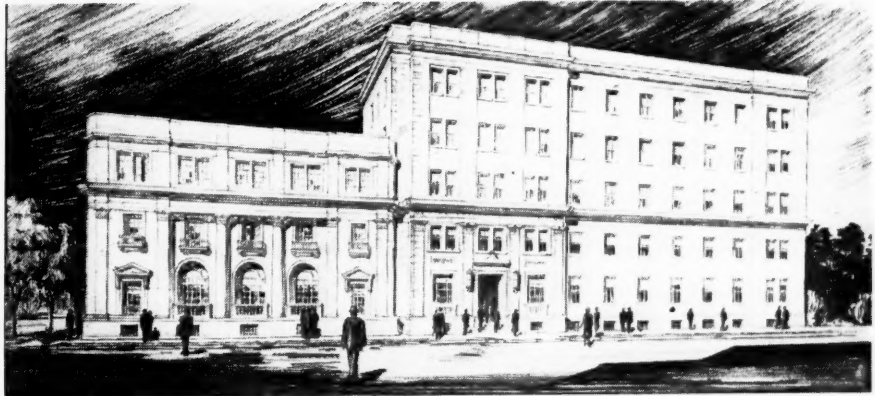
the new structure will have a combination heating and cooling system, air conditioned throughout, acoustical treatment of ceilings, a drinking water system, and three elevators.

Tennessee, Knoxville—Sprinkle Building. Improvements. Cost—\$100,000.

Architects — Barber & MacMurray, Knoxville.

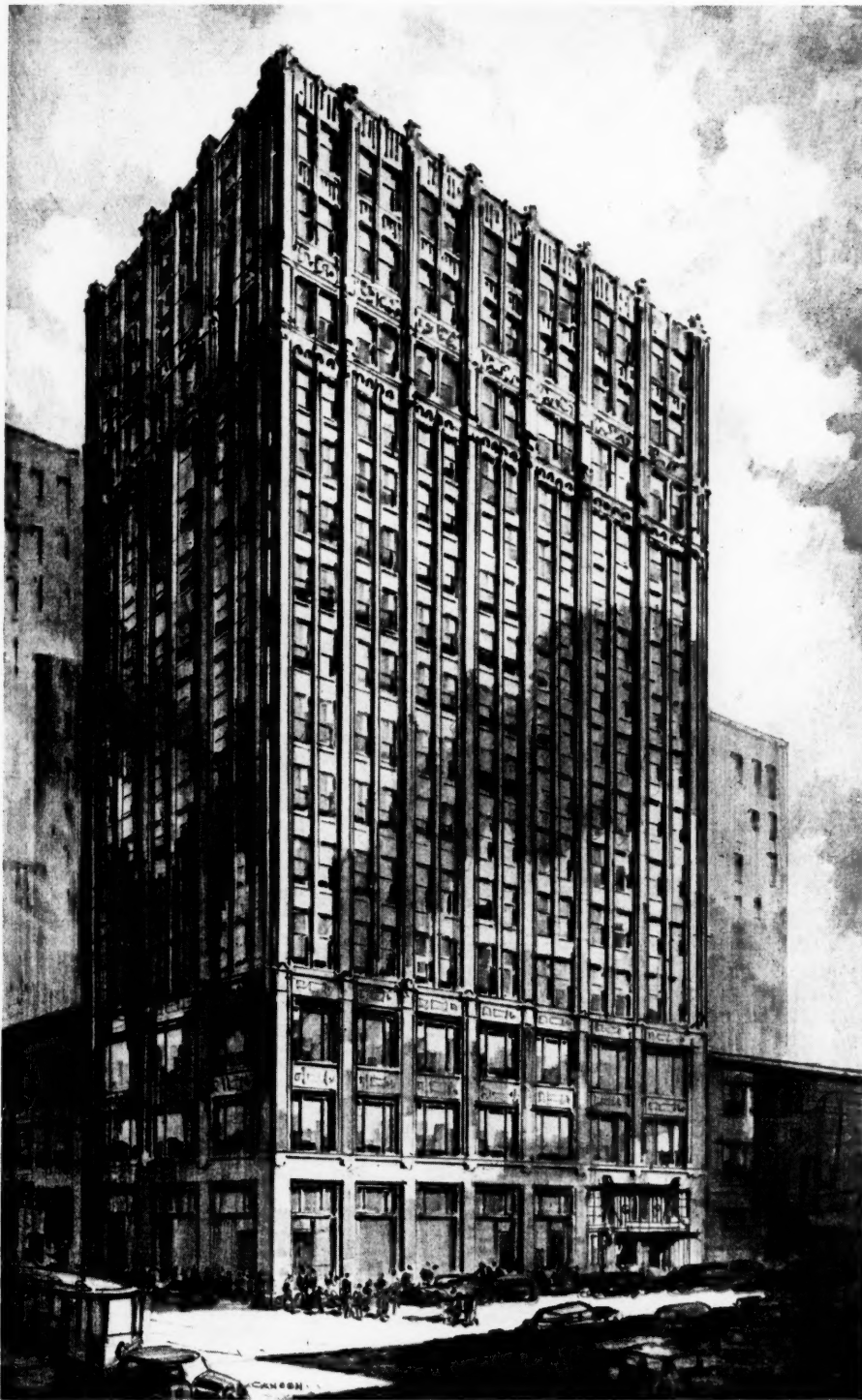
General Contractors—A. H. Whisman, Knoxville.

The project calls for 7 stories and basement, reinforced concrete structure,



Federal Farm Credit Administration Building, Columbia, S. C.

Gulf States Security Life Insurance Co., Dallas, Texas



tile and brick, stone trim, and new elevators.

North Carolina, Greensboro—Jefferson Standard Life Insurance Company. Installation of five new elevators in present 18-story office building by Otis Elevator Company, New York City. Cost—\$90,000.

Work will continue over a period of eight months; one elevator will be installed at a time so that service may be efficiently maintained. Each new elevator will have automatic signal control and complete power operation of car and hoistway doors. Each elevator will have base ventilation and a combination fan and indirect lighting fixture. Specifications call for yellow bronze pilasters forming panels, in each corner of which will be placed grilles of yellow bronze. New elevator entrances will be built. A new feature in elevator installation will be "automatic reversal" which means that during rush hours no car will travel higher than the last car or hall call which has registered on the controller, permitting the car to return to the ground floor immediately after answering the call.

South Carolina, Columbia—Farm Credit Administration. 5-story and basement office building for employees. Cost—\$400,000.

Architects — Lafaye and Lafaye, Columbia.

General Contractor—John C. Heslep, Columbia.

The building will be 132 by 74 feet, with a rear wing of 65 by 64 feet and will have reinforced concrete frames with pan joist construction and limestone exterior. Three Otis passenger elevators with 250 foot speed will be installed. Offices will be separated by movable steel partitions. Two automatic dumb waiters will serve all floors. The main lobby will have marble floors, marble finish on walls and ornamental plaster cornices. All ceilings of working spaces will be finished with acoustical tile. Campbell double hung steel windows, glazed with plate glass will be used throughout. Floors will be finished

(Continued on page 70)

FLORIDA'S ECONOMIC ADVANCE

By
Howard L. Clark

TO get a true picture of Florida's accomplishments and potentialities for development, it is well to review the statistical record of its material growth in the past 30 years. During this period the nation has undergone booms and depressions. Florida, likewise, has had its seasons of prosperity and adversity, but through it all it has steadily advanced after each lull until today its productive capacity indicates the trend or direction that its greatest advancement will take.

Since 1900 the population of Florida has more than trebled. The estimated wealth of the State has increased from \$355,000,000 to more than \$2,000,000,000 under depression values. Not generally considered a manufacturing State, Florida has increased its industrial output from \$37,000,000 in 1900 to approximately \$164,000,000. In 1900, the value of its agricultural output was about \$18,000,000 and now it is above \$85,000,000.

In its citrus and truck growing, Florida has maintained a steady growth despite the great expansion of these activities in the lower South, Texas and California. In addition, there is being developed a great tung oil industry and with the expected utilization of Southern pine for the making of newsprint paper, Florida is in a position to further expand its manufacturing capacity. At Panama City, Fla., is located one of the world's largest plants for the manufacture of kraft paper. Other industries of a chemical or allied nature are destined to be established to take advantage of its natural resources.

That Florida has withstood the worst of the depression and is making a strong come-back is evident. Beginning with the last winter season business in Florida showed a steady increase. This year it has made more progress and expectations are the 1934-35 season will be the best that Florida has had in several years. From Jacksonville to the lower end of the State, improvement in trade, in construction and in practically every line has been pronounced. The fact that national chain store organizations have extended operations and opened new

branch stores in many parts of the State is worthy of note. Indicative of the present business situation and outlook may be cited the highlights of activity in various cities in different sections of the State.

Jacksonville, with an estimated population of 144,000, reports an increase of new construction this year compared with last year. Expansions have been made in plants engaged in the manufacture of lumber products, cigars, etc., and extensions made to the city's shipping facilities. Expected enlarged tourist movement into Florida this winter will add materially to the city's business activity.

At Sanford, the port of Central Florida, there have been established many

new and enlarged enterprises doing a distributing business over the State.

Down in the center of the State, Orlando takes pride in a steady gain in population all during the depression. With between 30,000 and 35,000 permanent residents it has a winter tourist population between 12,000 and 15,000. Building operations show a 75 per cent increase since the first of the year with many new dwellings under construction. Retail trade is from 25 to 40 per cent better than a year ago. Two establishments for the manufacture of citrus wines and brandies, a new industry for Florida, have opened and a factory for making citrus packing crates and one to make citrus packing-house machinery were started during the year.

Haines City, in the Ridge Region of Florida, offers opportunities for the es-

(Continued on page 32)

Trend of Florida's Economic Advance

Total Area, 58,666 Square Miles; Land, 54,861 Square Miles; Water, 3,805 Square Miles

	1900	1910	1933
Population	528,000	753,000	1,554,000
Property, estimated value	\$355,743,000	\$936,885,000	\$2,200,000,000
Property, assessed value	\$96,687,000	\$165,000,000	\$519,243,000
Manufacturers:			
Products, value	\$34,183,000	\$72,890,000	†\$157,074,000
Installed horsepower	36,000	90,000	*\$193,000
Mineral Products, value	\$3,327,000	\$9,285,000	\$7,108,000
Public utility output:			
Electricity, kilowatt hours:		50,922,000	613,127,000
Lumber cut, board feet	788,905,000	992,091,000	439,000,000
Phosphate, tons	706,000	2,067,000	2,136,000
Cement consumed, barrels			597,000
Stone sold, tons			878,000
Approximate Land Area (acres)			*\$35,111,000
All land in farms, acres	4,364,000	5,253,000	*\$5,027,000
Improved land, acres	1,512,000	1,805,000	*\$2,271,000
Number of farms	41,000	50,000	59,000
Value farm property	\$53,929,000	\$143,183,000	*\$462,456,000
Value farm land	\$30,823,000	\$93,738,000	*\$352,855,000
Farm products, value	\$18,309,000	\$43,689,000	\$85,228,000
Farm crops, value	\$13,498,000	\$33,217,000	\$68,755,000
Farm crops, acres	1,020,000	1,221,000	1,161,000
Commercial, truck crops, value			\$15,458,000
Chickens, value			\$1,027,000
Eggs, value			\$2,707,000
Milk, value			\$9,213,000
Fishery output, value		\$3,389,000	\$2,973,000
Citrus Crop:			
Oranges, boxes	273,000	4,888,000	17,800,000
Grapefruit, boxes	12,000	1,062,000	10,700,000
Cotton, acres	222,000	257,000	96,000
Bales	54,000	59,000	27,000
Value, lint	\$2,592,000	\$5,500,000	\$1,215,000
Cottonseed, value	\$303,000	\$1,044,000	\$164,000
Tobacco, acres	2,000	4,000	6,200
Pounds	1,126,000	3,506,000	4,822,000
Value	\$254,000	\$1,025,000	\$707,000
Corn, acres	519,000	630,000	673,000
Bushels	4,156,000	8,190,000	5,384,000
Value	\$2,494,000	\$6,962,000	\$3,392,000
Oats, acres	33,000	42,000	7,000
Bushels	378,000	680,000	80,000
Value	\$189,000	\$442,000	\$46,000
Peanuts, pounds			28,080,000
Pecans, pounds			3,000,000
Cattle, number	751,000	845,000	494,000
Sheep, number	125,000	114,000	43,000
Swine, number	464,000	810,000	477,000
Horses, number	43,000	46,000	18,000
Mules, number	14,000	23,000	42,000
Banking resources		\$73,573,000	\$221,760,000
Paid-in capital		\$9,575,000	\$20,949,000
Individual deposits	\$10,150,000	\$46,943,000	\$158,620,000
Savings deposits	\$12,060,000	\$15,500,000	\$40,788,000
Clearing house exchange	\$12,700,000	\$117,100,000	†\$500,784,000
Life insurance written	\$7,058,000	\$17,947,000	\$145,469,000
Total in force	\$27,801,000	\$79,091,000	\$618,789,000
Exports, value	\$20,560,000	\$37,700,000	\$29,869,000
Imports, value	\$1,888,000	\$8,227,000	\$10,303,000
Railroad mileage	3,299	4,432	5,488
Motor vehicles, number		2,000	291,000
Highway expenditures	\$437,000	\$2,280,000	\$16,000,000
Public school expenditures	\$766,000	\$1,773,000	†\$17,020,000
School enrollment	109,000	148,000	†367,758

*1930. †1931. ‡1932. **1929. ††Comparative available figures.

FLORIDA DEVELOPMENT POSSIBILITIES

By
E. E. Callaway*

THE area, climate, resources—potential wealth—and opportunities of Florida are such as to make it possible for twenty million people to live within its borders in comfort and happiness.

The agricultural and horticultural possibilities of the State are so great and varied that it is impossible for one who has not given careful study to these things to vision their magnitude. Certain sections are highly developed, but there are many millions of acres of the finest and most productive lands in the State undeveloped.

The great Lakes and Ridge section from Sanford on the north to Sebring on the south, and extending from the Atlantic Ocean to the Gulf of Mexico, is the most highly developed. This is the citrus, vegetable and trucking belt. There are millions of acres within this area which are undeveloped, and the price of the lands is now reasonable.

Pulp and Paper Plant
Southern Craft Corporation, Panama City, Fla.

South of Sebring is the great Everglades, the richest and the finest agricultural empire on this earth, when its location, climate, natural conditions and productivity are all considered. Here are millions of acres of muck lands richer than the Nile Valley, with a twelve months growing season, and in the midst of which is Lake Okeechobee, a natural fresh-water reservoir 60 miles long and 30 miles wide, standing 17 feet above the surrounding country for irrigation and temperature control. This is the great sugar and bean and tomato belt. Dr. A. Daane of the State Experiment station at Bell Glade recently wrote to me that they are maintaining 80 head of cattle on 23 acres of this land, winter and summer, and that the pasturage is so great that during the summer months it is necessary to mow the grass. He also said to me that they produce from 15 to 35 tons of silage per acre on this land, and from 3 to 6 tons of alfalfa hay per acre. It is his opinion, as well as that of many other experts, that within 10 years Florida will lead the nation in the production of high quality beef, milk and butter fat. He came to Florida from the University of Wisconsin, and there is no better authority in this country on this subject than Dr. Daane.

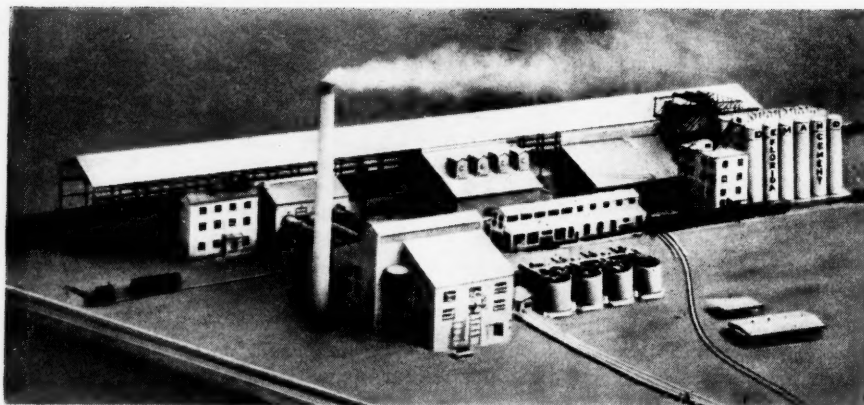
If the government will complete the dyke around the lake, and will finish

the canal system from Kissimmee to Miami and from Palm Beach to Fort Myers, this great Everglades section is and will be capable of returning an annual wealth of \$500,000,000, and will sustain in comfort and happiness five million people.

From the Withlacoochee river east to St. Augustine, and north and west to the Georgia State line and Mobile Bay is an agricultural empire yet undiscovered. It is still "Crackerland" and unknown and unappreciated by Northern people generally. In addition to being a great timber and live-stock region, it is especially adapted for the growing of high quality corn, cotton, peanuts, potatoes, figs, pecans, grapes, peaches, pears, blueberries and other fruits and vegetables. The climate and water are unexcelled, and millions of acres of this fine undeveloped land are available at prices from \$5.00 to \$25.00 per acre. The entire State of Florida will be tick free January 1, 1935, and cattle and dairy men will then find Florida to offer the finest opportunities in this industry of any other section of the nation.

It has been so easy to make a living in this country in the past that the native Southern people have not been industrially minded. That situation is fast changing. General health and living conditions being the best in the world because of our matchless all-the-year around climate, the vitamin and iodine contents of our fruits, vegetables





Courtesy Florida State Chamber of Commerce

**Florida Portland Cement Corporation,
Tampa, Fla.**

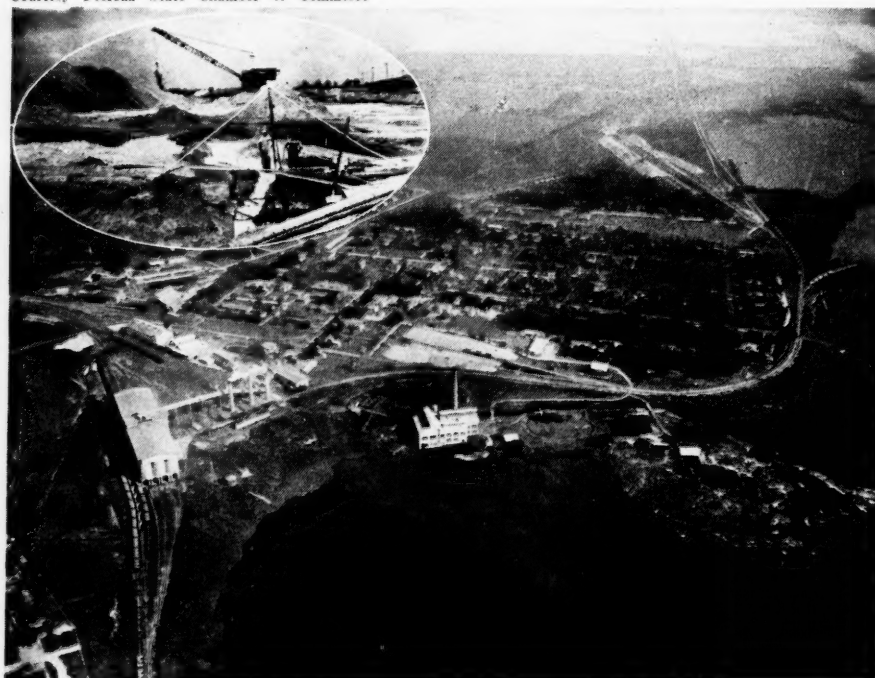
(A Florida product for Florida construction)

and fish, together with our recreational facilities, are great factors in determining cost production. Cost production is greatly influenced by the health and living conditions of the workers, as well as by the sources and supply of raw materials, transportation, congestion, etc. Workers and their families can live better and happier in Florida than any other section of the nation, and at about 50 per cent of the expense of the cold sections of the North. In the lower Southern Gulf States we have in great quantity all the basic raw materials of coal, iron, cement, limestone, cotton, hardwood timber and crude oil, and they are down grade by water transportation into our ports.

Phosphate Reduction Plant and Village

Operation of American Agricultural Chemical Corporation at Pierce, Fla. Insert — Bucyrus Erie dragline for removal of overburden and hydraulic equipment to wash down phosphate rock matrix.

Courtesy Florida State Chamber of Commerce



We believe that the future great export market of this country should be and must be in Latin America. The political and financial conditions in Europe make this a fact. Florida is at the door of that future market.



Photo Ray B. Dame

Sugar Factory in Florida Everglades

Plant of United States Sugar Corporation

When the Great Cross State Ship canal, better known as the Gulf-Atlantic Ship canal, has been built from Jacksonville via Lake George, Ocala and to Yankeetown; and when the West Coast

surveying and platting the city, and it is being planned to meet modern social, industrial and transportation problems. He expects to donate free of cost industrial and commercial sites to all worthy industry which desires to locate there.

The ship canal from Lakeland to Tampa Bay must also be completed, in order that we may have a deep-water outlet for the phosphate and citrus tonnage. When these canals have been built, industry will find this the best place in America to manufacture and distribute products to our own American market, and to Latin America. They will have a cost advantage here of at least 30 per cent over their competitors in the cold sections of the North.

From Sarasota to Panama City, Florida, is a storm-protected area with fine deep-water harbors with ideal living and working conditions which will become the great industrial and commercial section of the South. One has to only observe the tops of the big trees in this section to absolutely know that

(Continued on page 30)

FLORIDA IS HOST

To More Pleased Visitors Than Any Other State
They Come Back Year After Year

These Things
Invite You
SOUTHWARD:

Florida
The Sun
Your Health
Sports, Schools
Lower Cost of
Living
Surf Bathing
Fishing, Golfing
Motoring On Land
Or Water
Musical Entertain-
ment
Dancing
Ranch Life

LIVE AS YOU
PLEASE



Florida ships one-tenth of the winter-grown vegetables and fruits
that go to the markets of this country

AND YET, THE LEADING INDUSTRY OF FLORIDA IS

MANUFACTURING

Come to See Us a Million Strong. WE ARE LOOKING FOR YOU



*For information con-
cerning the state direct
your inquiry to*

THE
DEPARTMENT OF
AGRICULTURE

TALLAHASSEE
FLORIDA

TRANSLATING FAITH INTO WORKS

By
George Garner

ALMOST from the days of Ponce de Leon, a succession of keen, constructive business men have visioned Florida as a profitable development field and have translated their faith into works. Still fresh in memory, in modern days, are the late Henry M. Flagler and the late Henry B. Plant. They were magnificent developers of the opportunities opened to them.

In their stead today sits Alfred I duPont, in Jacksonville, devoting his mind and money to the development task which he, in turn, has undertaken.

Approximately, \$10,000,000 has been personally invested in Florida development by Mr. duPont in the past half-dozen years and: "I am prepared to invest millions more," Mr. duPont adds.

Beyond this, Mr. duPont has inspired the investment of probably \$100,000,000 in constructive development, and has co-operated in financing great projects by convincing investors of the soundness of

Rock Base Slag Surface-Treated Road

Mr. duPont has sponsored the development of more than 800 miles of hard-surface highways in north and west Florida.



Alfred I du Pont Has Personally Invested \$10,000,000 in Florida and Is Prepared to Invest Millions More in the State.

securities issued to enable remunerative expenditures.

By sponsoring and promoting more than 800 miles of hard-surface highways, he has opened north and northwest and much of west Florida to travel and transportation, previously restricted by antiquated roads.

As head of a great banking system, in eight Florida cities, with \$3,500,000 capital and surplus and aggregate resources of \$38,900,000, he provides financial facilities for agriculture and other industry and business and stimulates economic expansion.

Reforestation and the promotion of forestry in general are among his major enterprises, and his ownership of forest properties runs well up in hundreds of thousands of acres.

Also, his confidence in Florida values is demonstrated by his investments in fine office buildings and hotels in various cities in the State.



Alfred I. duPont

It is largely through the constructive work of such men and minds that the estimated property value in Florida has increased from \$355,000,000 in 1900 to \$2,200,000,000 in present days, or 520 per cent; that railroad mileage has expanded from 3300 to 5500 miles, in the same period, or 67 per cent, and similar development has been recorded in a score of other economic lines.

*As active figures in the railroad era, Flagler and Plant concentrated on rail transportation, though not neglecting many collateral developments which the expansion of the railroads naturally would inspire and also would make business for the carriers. So it was that Flagler opened a great railroad line from Jacksonville to Miami, developing a stretch 355 miles long, and large areas within influence of the line. Plant turned to the west coast and ran a great line through the heart of the State to the Gulf.

In this automobile and auto truck era, Mr. duPont has turned to the construction of highways, for the development of the State. The highways enthusiasm of the duPont family finds its greatest expression through the member now resident at Jacksonville. Chiefly through his aid and effort, over 800 miles of fine highways have been constructed in northern and western Florida, at an investment of more than \$50,000,000; and, "that is only the commencement," as Mr. duPont sees it. Great bridges have been constructed along the routes, and hundreds of square miles of fine properties have been made available for present use and future development.

In a survey of Florida highways, Mr. (Continued on page 30)



IF YOU ARE LOOKING FOR—

Health:

Panama City's wonderful climate, splendid water, an efficient Health Department that is eternally vigilant as regards sanitary conditions and recreational advantages that cannot be surpassed.

Wealth:

Panama City's situation in the Sun, as regards the business attracted over the Gulf of Mexico, offers the most versatile opportunity for Manufacturers, Brokers, Merchants, Investors and Promoters of any community in the country.

Happiness:

Panama City's location and climatic advantages coupled with the most congenial people to be found anywhere, offers happiness for all. Recreation to ease the tired mind. Beautiful seashore or wood and home-sites for the family. Versatile and social opportunities for man, woman and child. The finest of schools, churches and hotels.

Come To— PANAMA CITY FLORIDA

FASTEST GROWING PORT ON THE GULF OF MEXICO

THE LARGEST KRAFT PAPER MILL IN THE
WORLD IS LOCATED IN PANAMA CITY, FLORIDA

FREE INDUSTRIAL SITES!

The City of PANAMA CITY offers to arrange FREE SITES
for INDUSTRIES with weekly payrolls of \$2,000 or more.

Translating Faith Into Works

(Continued from page 28)

duPont discovered that vehicular transportation virtually was unknown in 25 per cent of the State, in which sand trails were the only roads. The west and the northwest, in which the State capital is situated, were without modern roads. At once, he organized the Gulf Coast Highway Association and through that has inspired and promoted and arranged for the financing of modern roads and bridges. The last link, over 700 miles, now has been provided for the celebrated Florida good roads "loop," extending 1500 miles from Jacksonville to Miami to Tampa to Pensacola and across-state to the point of starting. Approximately, 450 miles of road and bridges from Tampa to Pensacola cost \$35,000,000, to which was added 400 miles from Pensacola to Jacksonville.

Across St. Andrews Bay is a great bridge, financed largely through an \$8,000,000 bond issue which Mr. duPont arranged to float, named in his honor. A duplicate of this structure also is included in the road and is known as the Fons Hathaway bridge. The first bridge across the Suwannee River will cost \$1,500,000; a three-quarter mile span from Santa Rosa across the Choctawhatchee River will cost \$2,000,000, and another bridge has been thrown across Santa Rosa Sound to Santa Rosa Island, more than a quarter-mile, at proportionate cost.

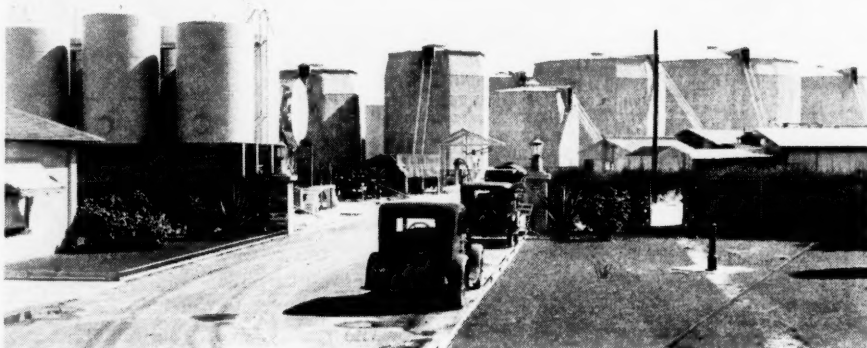
A. I. duPont Bridge

One of several bridges included in the \$50,000,000 highway improvement program initiated by Mr. duPont in north Florida.



Of possibly more moment than the aggregate of all his construction work was Mr. duPont's protection of many Florida banks against failure in the banking debacle, four or five years ago. In Germany at the time, Mr. duPont was informed of the crisis by a cablegram from Edward Ball, his executive aide, and immediately responded: "Use my personal fortune to save our banks and the depositors." With millions of dollars of Mr. duPont's personal securities, Mr. Ball sped to New York and cash was provided to fortify the duPont banks.

In his constructive work, it is computed that Mr. duPont puts more money into the State than he receives through his various Florida enterprises. His tax bills run into six digits, and help to pay the interest on State, county and community bonds in which he has invested. His contribution to education and charity is understood to run equally high. He gives employment, directly and indirectly, to literally thousands of men and women.



Bulk oil distributing plant with storage capacity of 160,000 barrels constructed by the Standard Oil Co. of Kentucky during the past year at Port Everglades, Broward County, Fla.

extent of calling attention to a great new industry which is expanding rapidly and is destined to give employment to thousands of people and return to our State millions of dollars annually, and that is the oyster business. The nature of our West or Gulf Coast from Fort Myers to Pensacola is such that it offers almost unlimited possibilities for the growing of a high grade oyster. Experiments by capable and reliable concerns at Apalachicola, Crystal River and other points have shown that domestic planting of oyster beds offer great possibilities for hundreds of miles along the Gulf Coast.

*Judge Callaway is chairman of the Florida State Bureau of Publicity and has been on a lecture tour of the East presenting facts about Florida and its development opportunities. He is the author of the new book "The Other Side of the South", an outstanding contribution to the factual literature on the Old and the New South.

Florida Development Possibilities

(Continued from page 26)

they have never had a tropical storm of any consequence.

Natural conditions inevitably point to the South, and to Florida, for the great industrial and commercial activity of the future.

If it is necessary to remove ten million people out of the congested North and East in order to save America from revolution and chaos, the only place where they can go and find comfort and happiness is in the South.

The South was once a one industry country—cotton—produced with negroes and "poor white trash". We then bought our agricultural supplies from the Northwest, farm tools from Ohio, and shoes and clothing from New England. The cotton boll weevil came and gave birth to a diversified agriculture and industry.

I only desire to mention our great fishing industry in this article to the

INDUSTRIES

*If you are seeking a new or branch plant—
why not consider*

JACKSONVILLE, FLORIDA —SOUTHSIDE?

Miles of deep water frontage.
Excellent transportation facilities.
Low taxation.
Low electric power rates.
Skilled and unskilled labor.
No strikes here.
Climate superb.



For additional information write

SOUTHSIDE BUSINESS MEN'S CLUB
Carl M. Taylor, President
106 W. MIAMI ROAD

J. GRAEME DREW,
Chairman Industries Committee
612 Dante Place

PORT EVERGLADES

*"FLORIDA'S DEEPEST AND
MOST ACCESSIBLE HARBOR"*

Dredged Depth 35 feet.

Ideally located 22 miles north of Miami.
Modern berthing and warehouse facilities.

Shipside railway, affording connections with
the Seaboard Air Line and Florida East
Coast Railroads.

Logical concentration and distribution point
for cargoes from or to southeastern United
States or Latin America.

Information regarding industrial locations or
Port facilities and services should be directed
to

Broward County Port Authority

Fort Lauderdale or Hollywood, Fla.

FLORIDA COLLIER & ASSOCIATED HOTELS

HOSTS OF THE FLORIDA COASTS

JACKSONVILLE

HOTEL GEORGE WASHINGTON—HOTEL MAYFLOWER

LAKELAND

HOTEL LAKELAND TERRACE

TAMPA

HOTEL FLORIDAN—HOTEL TAMPA TERRACE

BRADENTON

HOTEL MANATEE RIVER

SARASOTA

HOTEL SARASOTA TERRACE

WEST PALM BEACH

HOTEL ROYAL WORTH—HOTEL DIXIE COURT

MIAMI

HOTEL ALCAZAR—HOTEL HALCYON

*Write direct to any Hotel
for Booklets, Rates and Reservations*

MODERATE RATES FOR FINE ACCOMMODATIONS

We Know - - FLORIDA

For more than half a century we have
grown with the State of Florida, have
kept pace with its progress, and provided
banking facilities ample for its banking
Public.

The "BARNETT" is the oldest national
bank in the State.

*Capital, Surplus and Profits Nearly
Two and A Half Million Dollars*

THE **BARNETT NATIONAL BANK**

Established 1877

JACKSONVILLE

Send for a Copy of Barnett's Book of Facts about Florida.

This little 18-page booklet, printed in orange and blue cover (Florida
University colors) contains the material progress of Florida from
1912 to 1934 and many other interesting facts about the State.

Florida's Economic Advance

(Continued from page 24)

establishment of light manufacturing. It is practically in the center of Florida's citrus producing section. Business has improved greatly since October 1, and the Chamber of Commerce reports many inquiries are being received from industrial concerns relative to locating and taking up the manufacture of citrus by-products.

Daytona Beach reports trade prospects and general business improving as winter tourist season opens. A 40 per cent gain over preceding years, or since 1930, is anticipated.

West Palm Beach is preparing for one of the biggest tourist seasons in the past five years. With registrations and applications for utility service up 30 per cent there is a constant demand for homes and apartments. Many apart-

ments in the hands of receivers for several years have been liquidated and are being improved by new owners. The volume of trade for the year is approximately 10 per cent greater than in 1933. Business strictly dependent upon tourists has increased from 25 to 35 per cent over last year and in some cases 50 per cent over 1932.

Following the increased business of last season in the Miami area, more building, especially of small homes, has been undertaken the past few months than for some years. Expectations for one of the greatest winter seasons in the history of the whole section are based on increased activity and registrations now in evidence.

Improvements and alterations have been undertaken in greater amount during the past year in Fort Myers than in any previous year. Two citrus packing plants have been erected and several new business enterprises established. With a larger number of winter visitors than at any time in the past, it is ex-

pected an impetus will be given to new building activities and prospects are better than at any time in the last five years.

Completion of the \$1,500,000 Davis Causeway project connecting Tampa and Clearwater, on the West Coast, and a \$750,000 dry dock now under construction in connection with the Tampa Shipbuilding and Engineering plant are the major construction operations of the year in this section. Three breweries have been established and the Walgren drug chain has opened a large store and warehouse. A new \$20,000 theater and 10 new filling stations at a cost of \$53,000 were built. Greater Tampa, with an estimated population of 125,000, anticipates improved trade due to a good citrus crop and what is believed will be one of the greatest tourist seasons in its history.

Panama City in Northwest Florida has made rapid progress since 1930. During 1934 there have been established 12 new industries and 20 new mercantile and other business enterprises. Value of new business and office buildings erected this year is \$100,000, homes and apartments \$125,000 and government construction amounts to \$600,000. With several large industries in prospect in addition to those established, including one of the largest paper mills in the world, the general business outlook is gratifying.

The increased volume of trade reported by Pensacola is indicated by bank clearings for the first 10 months of 1934 which amounted to \$55,304,000 as against \$53,265,000 for the entire year 1933 and \$52,000,000 for 1932. During the past six months, five new business enterprises, three chain store branches, were established in Pensacola, and more than \$328,000 of new construction was undertaken up to November 1.

Other communities all over the State are experiencing increased activity, and as a whole, Florida is in a decidedly better economic position than it has been for several years and is on a much sounder basis than during the wild boom days.

The ATLANTIC NATIONAL BANK OF JACKSONVILLE

AND AFFILIATED BANKS

SPRINGFIELD ATLANTIC
BANK, JACKSONVILLE

THE FIRST NATIONAL
BANK, GAINESVILLE

THE SANFORD ATLANTIC
NATIONAL BANK

FIRST ATLANTIC
NATIONAL BANK OF
DAYTONA BEACH

THE PALATKA ATLANTIC
NATIONAL BANK

WEST PALM BEACH
ATLANTIC NATIONAL
BANK

"Sound Protection and Friendly Co-operation in all Financial Matters"



DAVIS

CYPRESS TANKS

FACTORY TANKS AND STEEL TOWERS

If you handle liquids, for storage or processing, Davis Cypress Tanks very likely will provide new economies. For water, common chemicals, or for mixing and storing solids and compounds. Industrial plants and railroads have used our tanks for 46 years. Ask for estimates and catalog — both sent promptly on inquiry.

G. M. DAVIS & SON
P. O. Box 5, Palatka, Florida

WEST COAST HEADQUARTERS FOR

**OIL BURNING AND
REFRIGERATION EQUIPMENT**

JOHNSTON ENGINEERING CORP.
ST. PETERSBURG, FLA.

Mark R. Tennant

► Twenty years specializing in Florida Colonization Tracts and Industrial Opportunities

141 N. E. 2nd St.

MIAMI

FLORIDA FOODSTUFFS

IN the past decade Florida has developed a great dairy industry to supply her ever-increasing population. However, up to the present, this industry has been heavily dependent on feedstuffs shipped in from outside the state, much of it from so far that the freight forms an important portion of the selling price of the feed. This situation is likely to change in the not distant future for recent investigations made as the potential production of feedstuffs in South Florida are opening some encouraging possibilities.

Mark R. Tennant of Miami, a large land owner in the Upper Glades section, in a survey of the dairy feed situation in the state covering many months and recently completed, found some very interesting and significant facts in seeking an answer to the question, "What proportion of the present feeding formula of our dairies, or it's feeding equivalent, can be economically produced in South Florida?"



Napier grass produces tremendous tonnage in upper Everglades of Florida.

It was found that, with the exception of small grains and their derivatives, practically all feeds necessary to make a balanced ration for dairy cows can be produced in South Florida. They may be classified under five general headings:

1. Cereals and cereal products.
2. Oil bearing seeds.
3. Legume hays.
4. Grass hays.
5. Roots and miscellaneous.

Among the acceptable concentrates which can be produced successfully are corn, peanut cake, soy-bean and sunflower meals, alfalfa as an annual, and other high protein legume hays of practically equivalent feed value such as cow peas, peanut hay, vetch, Austrian peas, etc. Among the successfully grown grasses are napier, para, Johnson, Dallis,

and green oats. Mangel beets can be grown and blackstrap molasses is available at a low price from the established sugar cane industry in the Upper Glades.

It is believed that if an elevator and mill were established in the Upper Everglades region a large volume of corn could be purchased from local farmers who would grow it as a summer crop. Lack of an assured market and proper storage has discouraged large corn planting in the area. Recent activity among the growers at Moore Haven may lead to the erecting of such a plant.

Mr. Tennant especially stressed the importance of the development of the mechanical dryer in the growth of a feed industry in South Florida, pointing to the recent purchase of such equipment by the State Prison Farm at Belle



Corn produces 50 to 60 bushels per acre in the upper Glades section of South Florida.

Glade and the proposed establishment of a drying plant at a point near Moore Haven as showing this trend in the industry in that section.

Farm life Conception

When one mentions "the farm" one naturally forms a mental picture of what constitutes a farm. Do you picture a cozy cottage in a setting of fruit trees, with flowers and shrubs about and a massive barn out back, chicken yards, pigs in a pen, cows grazing in the pasture, a family vegetable garden and land stretching out beyond for growing market crops? Does your mind picture an appetizing meal prepared from the products of the farm?

Anyway, that is the vision we should see and more Florida farms should conform to that picture. It is unfortunate for the farming industry that during past years a great many turned to the occupation of farming as a means of livelihood, with the thought of an easy living. Plant a crop and watch it grow. It was an occupation that offered a living with little effort, at least one could exist. This has been true especially in the South and particularly in Florida, where the fruits of the soil are harvested practically the year 'round.

But we are now in a different era. Careful, intelligent planning and management have made the farm a place of good living, especially the small diversified farm, and we need more of the kind of farmers who visualize and can actually materialize a farm as we first pictured.

Such farming is the natural, sure way to live a normal, happy life, always assured of plenty to eat. When pears are ripe a good quantity is canned and

stored. The same is true of other fruits and vegetables. Cured meats are stored away, and the garden in season, the chickens and the cow give their share, leaving very little to buy.

Of course, it requires work to live in such secure luxury, and who will dispute that such living is "secure luxury." There are things to be done on the farm every day, rain or shine, and there are many difficulties to overcome. One must keep continually on the alert for better methods of planting, cultivating and combating the natural enemies of crops and trees. It is no lazy man's job. It is a fascinating, invigorating work that requires both brain and brawn, a pleasant, healthful occupation when intelligently pursued.

Our present day mode of living has raised the standard of farm life to that of the city dweller. Machinery, electric lights, plumbing in the home, radio and many other little conveniences are the farmer's at a very nominal cost. Towns and cities with their shopping centers, theatres and other amusement centers, are more numerous and easily reached by auto over hard-surfaced roads. With all this the farmer can really live and enjoy living. He has a feeling of security, no thought of losing "his job."

In truth, farming, intelligent, diversified farming, is the true American mode of living and is worth the consideration of those who have the ambition to live for the joy of living.

For Florida Farm Literature—write—

MODEL LAND COMPANY

Flagler System

St. Augustine—Florida

\$55,625,000 IN NEW CONSTRUCTION DURING NOVEMBER GREATEST OF YEAR

ENGINEERING and construction contracts let in the 16 Southern States amounted to \$55,625,000 during November, bringing the total for the year to \$477,782,000. The November awards set a new high record for any month this year, based on reports published by the MANUFACTURERS RECORD DAILY CONSTRUCTION BULLETIN. They are 44 per cent greater than in October and the total for the first 11 months is 56 per cent more than the corresponding period of last year, 25 per cent more than the aggregate valuation for the 12 months of 1933 and surpass the 1932 awards by 11 per cent.

Highway Construction Leads

Highway, paving and bridge lettings of \$178,467,000 for the 11 months this year lead all other construction activities in value of awards. Road and bridge contracts let in November amounted to \$16,385,000 as compared with \$12,365,000 during October.

Industrial and Engineering Projects

Ranking second only to highway work, industrial and engineering projects awarded for the 11 months amounted to \$174,751,000. The November total was \$25,936,000, compared with \$17,283,000 for October.

Purely industrial construction in the 11-month period aggregated \$73,925,000, of which \$11,670,000 was awarded in November as compared with \$7,139,000 in October.

This new industrial development is made up of a variety of smaller plants and expansion programs. Included were ice cream plants, laundries, quarries, dairies, textile mills, gas plants, bulk oil storage facilities, and printing establishments.

Flood Control

Awards to December 1 for flood control work, levees, revetments, seawalls amounted to \$40,000,000, \$3,000,000 of which was let in November. Closely allied with the above is dredging. Awards for the 11 months amounted to \$23,334,000. Dredging contracts let during November totaled \$6,305,000.

Waterworks and Sewers

Contracts for waterworks and sewers

in the South aggregates \$33,505,000 up to December 1 this year. Southern towns and cities are installing modern sewage disposal facilities, adding efficient pumping systems and establishing filtration plants to provide adequate water supply for domestic and industrial use.

Gain in Building Contracts

During November there was a continued increase in the construction of new dwellings and apartments. Dwelling awards aggregating \$2,337,000 brought the 11 month total to more than \$17,000,000. Store building construction up to December 1 was \$4,739,000, while bank and office building contracts let were \$3,836,000 and apartment house and hotel awards were \$3,394,000.

Selected Items of the Month

The following items, selected from the complete record of engineering and building operations published in the MANUFACTURERS RECORD DAILY CONSTRUCTION BULLETIN, are representative of the variety of projects reported during the month.

Proposed Work

Ark., Bentonville—Armour Packing Co., Chicago, Ill., reported, surveying site for establishment of cheese plant.

Ark., Harrison — City, R. Worthington, Mayor, soon receive bids for \$125,000 sewer extension; F. A. Pritchett, Wallace Bldg., Little Rock, Engr.

Ark., Hot Springs—City has plans before PWA for approval of sewerage project; may call for bids about Jan. 1; Black & Veatch, Engrs., Mutual Bldg., Kansas City, Mo.; estimated cost \$300,000.

D. C., Washington—George A. Fuller Co., Munsey Bldg., low bidder at \$186,900, for office building addition 815 Fifteenth St., N. W., for Bricklayers, Masons & Plasterers Union; 9 stories; stone, brick, steel and concrete; waterproofing; tile floors; skylights; heating; ventilating; marble, bronze; oil burner; caulking; metal roof; Vorhees, Gmelin & Walker, Archts., 101 Park Ave., New York.

D. C., Washington—Howard University, Albert I. Cassell, Archt., announces date of bids in few days for construction of library building estimated to cost more than \$500,000; 1,600,000 cu. ft. space; fireproof construction; structural steel and concrete, brick and limestone facing, slate roof, rubber tile, cork, wood floors; 23 stories, 208x110 ft.; Francis R. Weller, Constt. Engr., Mills Bldg.

Ga., Athens—Cabinet sketches have been completed by Hentz, Adler & Shutze, Archts., Candler Bldg., Atlanta, for building program at University of Georgia; working drawings will be started upon official notification of approval by Public Works engineer; Robert & Co., Bona Allen Bldg., Atlanta, supervising architects for entire State university expansion program.

(Continued on page 36)

SOUTHERN CONSTRUCTION ACTIVITIES

	November, 1934		January-November, 1934	
	Contracts Awarded	Contracts to be Awarded	Contracts Awarded	Contracts to be Awarded
General Building				
Apartments and Hotels	\$ 306,000	\$ 598,000	\$ 3,394,000	\$ 11,957,000
Association and Fraternal	275,000	92,000	730,000	1,017,000
Bank and Office	906,000	400,000	3,836,000	5,103,000
Churches	75,000	242,000	1,402,000	3,414,000
Dwellings	2,377,000	1,760,000	17,880,000	26,036,000
Stores	511,000	1,302,000	4,739,000	7,147,000
	\$ 4,450,000	\$ 4,394,000	\$ 31,981,000	\$ 54,674,000
Public Buildings				
City, County, Government and State	\$ 6,851,000	\$ 8,097,000	\$ 64,434,000	\$ 88,394,000
Schools	2,003,000	9,727,000	28,149,000	84,420,000
	\$8,854,000	\$17,824,000	\$ 92,583,000	\$172,814,000
Roads Streets and Paving	\$16,385,000	\$17,022,000	\$178,467,000	\$141,785,000
Industrial and Engineering Projects				
Dredging	\$ 6,305,000	\$ 7,357,000	\$ 23,334,000	\$ 58,238,000
Filling Stations, Garages, etc. .	680,000	350,000	3,394,000	3,599,000
Industrial Plants	11,670,000	8,513,000	73,925,000	170,267,000
Levees, Revetments, Dikes, etc.	3,687,000	1,475,000	40,593,000	25,912,000
Sewers, Drainage and Water-works	3,594,000	9,308,000	33,505,000	131,729,000
	\$25,936,000	\$27,003,000	\$174,751,000	\$389,745,000
Total	\$55,625,000	\$66,243,000	\$477,782,000	\$759,018,000

RECOVER RIGHT
with a
Barrett
ROOF

BROWN PAPER MILLS, WEST MONROE, LOUISIANA.

Owner: The Brown Paper Mill Company, Inc., Monroe. Consulting Eng.: George F. Hardy, New York, N. Y. Gen'l. Cont: Morton C. Tuttle Co., Boston, Mass. 205,000 sq. ft. of Barrett Specification Roofs (Bonded for 20 years) applied by Interstate Roofing and Foundry Co., Anniston, Ala., and Monroe Roofing and Sheet Metal Works, Inc., Monroe.



the MOST DEPENDABLE roof protection America has developed

Barrett Specification Roofs are the result of eighty years of successful research and manufacturing experience. They are constructed of the finest quality pitch and felt it is possible to produce, and applied to the building according to the time-tested and time-proved Barrett Specification. Bonded for 20 years (or 15 years) against repair or maintenance expense, they are built to outlast by many years the term of the bond.

Leading architects, contractors and building owners place in them a degree of confidence that finds few parallels in the building industry. Their preference is based upon knowledge of performance records.

For new buildings or for reroofing old buildings, Barrett Roofs cost less in the

long run. Recover right—the Barrett way. Consult with your local Barrett Approved Roofer, or write us.

THE BARRETT COMPANY

40 Rector Street New York, N. Y.
2800 So. Sacramento Avenue Chicago, Ill.
Birmingham, Alabama

In Canada: THE BARRETT COMPANY, Limited
5551 St. Hubert Street Montreal, P. Q.

Barrett **ROOF INSPECTION**

For years The Barrett Company has maintained a Roof Inspection Service that has been the means of saving industry many thousands of dollars. A trained Roof Inspector will make a complete examination and report of your roof. This service entails no obligation and is offered free to owners of flat-roofed buildings located east of the Rockies. We will gladly arrange a Roof Inspection for you.

Proposed Work

(Continued from page 34)

Ga., Atlanta—Georgia School of Technology, Dr. M. L. Brittan, Pres., plans experimental building, Third and Cherry Sts., N. W.; 62 x 128 ft., 1 story, reinforced concrete, structural steel columns and trusses, brick walls, steel sash, metal doors.

Ga., Atlanta—Garlington-Hardwick Co., Red Rock Bldg., plans addition to heating plant and complete insulation of 6-story Red Rock Bldg., Spring and Cain Sts., N. W.

Ga., Atlanta—Public Works Emergency Housing Corp., care of D. A. Calhoun, Supervisor, 530 C. & S. Bank Bldg., Atlanta, have plans nearing completion by Burge & Stevens, Archt., 101 Marietta St. Bldg., Atlanta, for housing project Techwood section, probably be ready for distribution by Nov. 30; units 2 and 3 stories; rein. conc.; brick; hollow tile; cost \$2,700,000; W. H. Armstrong, Struc. Engr., 101 Marietta St. Bldg.

Ga., Atlanta—Board of Education plans additions to various schools:

Ga., Cochran—Plans for the building at the North Georgia College will be ready in about 30 days, according to R. Kennon Perry, Archt., Mortgage Guarantee Bldg., Atlanta; Robert & Co., Atlanta, supervising architects for entire State university expansion program.

Ga., Douglas—Preliminary sketches are being completed by Ivey & Crook, Candler Bldg., Atlanta, for erection of building at South Georgia State College; Robert & Co., Bona Allen Bldg., Atlanta, supervising architects for entire State university expansion program.

Ga., Milledgeville—Plans will probably be completed by Jan. 15, 1935 for building program at Georgia State College for Women, according to W. Elliott Dunwoody, Jr., Archt., 400 Broadway, Macon. Robert & Co., Bona Allen Bldg., Atlanta, supervising archi-

Ky., Shepherdsville—Henry Bickel Co., 435 Garden, Louisville, has tentative contract for distribution system, 50,000 gal. steel tank, and river intake; Municipal Engineering Co., Engr., 518 Citizens Bldg., Louisville.

LOUISIANA—T. L. James & Co., Ruston, low bidder at \$240,693 for 7.727 mi. 20-ft. concrete, from Elliott City to Lebeau intersection on Baton Rouge-Apelousas section of Evangeline highway, in St. Landry and Pointe Coupee parishes.

Louisiana—Treasury Dept., Procurement Division, Public Works Branch, Washington, D. C., has plans under way for post offices at DeRidder, \$55,000; Tallulah, \$55,000; Bastrop, \$50,000; sites selected and surveys ordered for \$55,000 post office at Winnfield and \$50,600 post office at Plaquemine.

La., Chinchuba—Chinchuba Institute for Deaf and Dumb, Mother Superior LaSalle, considering tentative plans for rebuilding burned structure.

La., Jackson—City, F. P. Joseph, Conslt. Engr., Glenmora, La., will probably call for bids in 60 days on \$44,000 water works improvements, including pumping plant, motor driven pump, air compressor, 50,000 gal. surface conc. reservoir, 25,000 gal. elevated tank, 125 ft. high; 150 g.p.m. 130 ft. head centrifugal pump, 500 gal. 238 ft. head pump, 8-in. water well, 200 gal. 300 ft. deep; 2600 ft. of 6-in., 3700 ft. of 4-in. c. i. pipe; 5 tons of cast iron specials; valves, fire hydrants;

20,000 ft. of 2-in., 10,000 ft. of 1-in. and 2000 ft. of ¾-in. galv. pipe.

La., New Orleans—Public Belt Railroad Comsn. has low bid of \$60,759 from White Way Corp., Milwaukee, Wis., for lighting system for combined railroad and highway bridge over Mississippi River; Modjeski, Masters & Chase, Inc., Engrs., Keystone Bldg., Harrisburg, Pa.

La., New Orleans—Lighthouse Service has low bid of \$72,500 from R. H. Sharp & Co., American Bank Bldg., New Orleans, for construction of 30x500-ft. section one of concrete deck wharf at site of proposed lighthouse depot, west side of Inner Harbor Navigation Canal, between Galvez St. wharf and St. Claude Ave.

La., Shreveport — J. F. Borleand, Mgr., Jackson Brewing Co., New Orleans, will construct \$200,000 brewery at Shreveport.

La., West Monroe—Quachita Parish Gravity Drainage Dist. No. 1, Sam H. Humphries, Sec., receives bids in about 60 days for \$75,000 work including conc. and pumping machinery, pumping station for drainage, etc.

Md., Baltimore—Balmor Corp., Clipper Rd., Woodberry, applied for permit for shipping and storage building, 3500-04 Clipper Rd.; brick; rein. conc. and steel frame; 2 stories; 31 x 207 ft.; Carlstrand Engineering Co., 10 W. Chase St., Engr. and Bldr.

Md., Crownsville, Anne Arundel County—Crownsville State Hospital has low bid of \$314,250 from Carlson and Carlson, Annapolis, Md., for group of buildings for feeble-minded children; Office of Joseph Evans Sperry, Archts., Calvert Bldg., Baltimore.

Mississippi—Treasury Dept., Procurement Division, Public Works Branch, Washington, D. C., has plans and specifications under way for post office at Bay St. Louis, \$50,000; Louisville, \$50,000; Indianola, \$50,000; Philadelphia, \$50,000; Starville, \$53,000; Natchez, \$50,000; sites have been selected and surveys ordered for \$107,000 post office at Biloxi and \$75,000 post office at Oxford.

Miss., West Point—Krouse & Brasfield, Archt., Meridian, have had plans approved for building to house garment plant on W. Main St.; brick; 100 x 271 ft.; sub-station to be erected by Mississippi Power Co., Forest St. will supply electrical energy for plant; windows of plant will be of ventilating, steel sash type; monitor type roof; locker rooms and 10 lavatories.

N. C., Greensboro—Broadfoot Iron Works, Inc., foot of Church St., Wilmington, employed for certain engineering work for a corporation now being formed to be known as the Carolina Pyrophyllite Co., to be located about 30 miles from Greensboro; company plans installing mill to grind pyrophyllite, a crystalline dry material on order of steatite or soap stone; plan production of 5 tons per hour; will install jaw crusher to crush raw material to approximately ¼-in. fineness.

N. C., Statesville—Dept. of Agriculture has low bid of \$53,987 for office and laboratory building, boiler house, from Gilbert Engineering Co., Statesville.

Okla., Checotah—City soon receive bids on water works; cost \$60,000; Burns & McDonnell Engineering Co., Engrs., W. Linwood Blvd., Kansas City, Mo.

SOUTH CAROLINA — State Highway Comsn., Charles H. Moorefield, Engr., plans

Selected News Items

Representative of the New Southern Engineering and Building Projects Reported During the Month by the MANU- FACTURERS RECORD DAILY CONSTRUCTION BULLETIN.

expending approximately \$2,000,000 for bridges during next two years.

S. C., Greenville—Father Michael, of Belmont, Abbey, Belmont, N. C., announces that he has associated with Charles C. and Walter W. Hook, Charlotte, N. C., on plans for \$80,000 addition to St. Francis Infirmary; plans are not completed; the general contractor will be Gallivan Construction Co., Greenville; subbids after Jan. 1; built-up roofing, sterilizers, X-ray, elevator.

Tennessee — TVA, New Sprinkle Bldg., Knoxville, authorized construction of dam on Tennessee River near Pickwick Landing.

Tenn., Knoxville—Dept. of Agriculture has low bid of \$22,837 from E. J. Pfozter, Philadelphia, Pa., for construction of corn and cotton laboratory; Mark K. Wilson Co., Chattanooga, second at \$22,986.

Tenn., Knoxville — Burns & McDonnell Engineering Co., Conslt. Engrs., Kansas City, Mo., have practically completed plans for distribution system for city; probably be 6 weeks before bids will be called for work.

Texas—Sabine Valley Gasoline Co., Ernest Ratcliff and J. D. Beard, both Shreveport, La., erect compressor gasoline plant with daily capacity 15,000,000 cu. ft. located south of Sabine River in Gregg county; will serve 1000 producing wells already contracted for by the company.

Tex., Alice — Emmert & Emmert, Corpus Christi, construct oil refinery ½ mile north of Alice; conc. footing being placed for building; build bridge to connect building with paved highway.

Tex., Beaumont—Schuhmacher Co., wholesale grocers, T. S. Reed Bldg., soon let contract for 2 story building Holmes St. off Fannin St.; 140 x 170 ft.; air conditioned; include modern cold storage plant with machinery; paper department in specially built section; interior loading space for 10 auto trucks; Livesay & Wiedeman, Archts.

Tex., Burnett—City has loan and grant of \$46,000 for installing water works system, including pumping plant, elevated tank, distribution lines and well; J. W. Beretta Engineers, Inc., National Bank of Commerce Bldg., San Antonio, Engrs.

Tex., Beaumont—State Legislature passed bill providing for bridge over Neches River between Port Arthur and Beaumont; cost estimated at \$1,500,000; Jefferson County votes in December on \$750,000 bonds.

(Continued on page 38)

Business needs **SPEEDY Written Communication** **THIS SERVICE PROVIDES IT!**

CHANGING conditions have placed many new demands on American business, but none greater than the need for *speed* and *accuracy* in the exchange of written information with branch offices or other concerns . . . in the same city or across the continent.

The Bell System offers a service to meet this need . . . **TELETYPEWRITER EXCHANGE SERVICE** . . . a development that does for the typewritten word what telephone service does for the spoken word.

Teletypewriter service is two-way . . . orders can be transmitted and shipping information received on the same connection . . . questions asked and immediate replies obtained.

The service is fast, direct, private and accurate. At both ends of the connection identical typewritten copies of everything are available for a permanent record. It is so flexible there is no limit to the variety of subjects for which it is used.

THIS IS HOW IT WORKS

When you subscribe to this modern service, a machine closely resembling a typewriter is installed in your office and connected by wire to a teletypewriter "central."

To get another subscriber, maybe a distant factory, your typist simply types the call number to the teletypewriter "central," who completes the connection about as fast as an out-of-town telephone call. Your message then goes *direct* to the distant machine. Typing a character on your teletypewriter instantly prints the corresponding character on the connected machine, insuring accuracy. Both machines can send and receive on the same connection.

Teletypewriter service may also be had on a *private-line* basis with two or more points connected for a continuous period of one or more hours each day.



Your local Bell Telephone office will gladly explain how this service can be used to advantage by your company

BELL SYSTEM TELETYPEWRITER SERVICE

Proposed Work

(Continued from page 36)

Va., Norfolk—College of William and Mary has \$100,000 Public Works funds for lecture hall and gymnasium for Norfolk division.

W. Va., Charleston—Charles A. Miller, owner of Capitol Theatre, 1016-18 Lee St., plans amusement centre, remodel present building at cost of \$60,000, install \$15,000 equipment; plans by D. A. Carmichael, Archt., Columbus, O.; auditorium will have seating capacity of 3500; install removable seats and bleachers; permanent stage; building will be 225 ft. long, 70 ft. wide; roof garden; install new front; lobby with dressing rooms; construct balcony; motion picture projection room, etc.

W. Va., Hurricane—J. E. Settle, Engr., Charleston Natl. Bank Bldg., Charleston, W. Va., preparing plans for water works, plans out about Jan. 1; PWA allotment of \$51,000.

Bids Asked

ALABAMA—State Highway Dept., Montgomery, opens bids Dec. 22 for project in following counties:

Dallas-Wilcox — 9 mi. grading, drainage, gravel surface and bridges, Selma-Camden Road.

Ala., Mobile—Treasury Dept., Procurement Division, Public Works Branch, Washington, D. C., opens bids Dec. 14 for construction of single attendants' quarters, San Island Quarantine Station.

Ga., Atlanta—Public Works Emergency Housing Corp., care of D. A. Calhoun, Supervisor, 530 C. & S. Bank Bldg., Atlanta, receives bids Dec. 20 for \$2,700,000 Techwood low cost housing and slum clearance project; project will replace 13 blocks of slum area, will accommodate 603 families in apartments and row houses, together with 318 students in a dormitory; final plans completed.

Ky., Midway—City opens bids Dec. 12 for constructing water works.

La., Thibodaux—Lafourche Parish School Board opens bids Jan. 2 for construction of 2-story brick high school; \$73,000; Favrot & Reed, Archts., Nola Bldg., New Orleans.

SOUTH CAROLINA—State Highway Dept., Columbia, opens bids Dec. 13 on projects in following counties:

Barnwell-Bamberg — U. S. Public Works Project No. N. R. S. 367-B Sections 1 & 2, bit. surfacing of 4.572 miles of Route 64 from Hercules Creek to Olar.

Barnwell—U. S. Public Works Projects Nos. N. R. M. 117-C and N. R. M. 151-B, widening with bituminous surfacing and construction of curb and gutter on Routes 3 and 64 in Barnwell, Route 64 from county courthouse to Turkey Creek and Route 3 from A. C. L. R. R. to Main Street.

Saluda-Aiken—U. S. Public Works Project No. N. R. S. 376-A & B (1935), bituminous surfacing of 3.562 miles of Route 392, from Ridge Spring to intersection with U. S. Route 1.

Oconee—U. S. Public Works Project No. N. R. S. 365-B (1935), the bituminous surfacing of 5.444 miles of Route 18 from Townville toward Oakway to Route 181.

Marion—U. S. Public Works Project No. N. R. H. 313-B (1935), construction of 1.179 miles of earth graded road on Route 38, from a point approximately one-half mile south of Marion city limit to Route 175.

Calhoun—U. S. Public Works Project No. N. R. H. 356 (1935), construction of 3.668 miles of earth graded road on Routes 2

and 21, from junction with Route 45 to junction of Routes 31 and 52, known as the St. Matthews Cut-Off.

Dillon—U. S. Public Works Project No. N. R. S. 386-A (1935), (road work) construction of 6.548 miles of earth graded road on Route 57, from Dillon to Floydale.

Calhoun—U. S. Public Works Project No. N. R. H. 356 (1935), construction of 142.04-ft. treated timber, rein. conc. and structural steel bridge over Southern R. R. on Routes 2 and 21 near St. Matthews.

Dillon—U. S. Public Works Project No. N. R. S. 386-A (1935), construction of a 90-ft. rein. conc. bridge over Maple Swamp on Route 57, approximately 2½ miles south of city limits of Dillon.

Marion—U. S. Public Works Project No. N. R. H. 313-B (1935), construction of 90-ft. rein. conc. bridge over creek on Route 38 approximately one mile east of Marion city limit.

Tenn., Milan — Treasury Dept., Procurement Division, Public Works Branch, Washington, D. C., opens bids Dec. 17 for construction of post office.

Tex., Marquez—City receives bids Dec. 11 for water works, including water well; pumping equipment; elevated tank and tower; water distribution system; buildings for pump station, etc.; Southwest Engineering Co., Engrs., Littlefield Bldg., Austin.

Tex., Pecos—City receives bids Dec. 14 for improvements to existing private water works lately acquired; work includes 11,000 ft. of 8-in., 19,000 ft. of 6-in., 2500 ft. of 4-in. c. i. pipe; deep well turbine; motor; 10,000 gal. fathering tank; 200,000 gal. storage reservoir; 11 miles of 10,500 volt transmission line, etc.; H. E. F. Helland, Const. Engrs., Frost National Bank Bldg., San Antonio.

Tex., Richmond—Fort Bend County opens bids Dec. 10 for court house addition and jail; 4 stories, 42x58 ft., 15 rooms, brick and reinforced concrete, built-up roof, terrazzo floors, elevators; \$80,000; Page Brothers, Enfield-Gracy Bldg., Austin, Archts.

Tex., Roanoke—Board of Education opens bids Dec. 10 for \$24,500 high school and auditorium; 192 x 142 ft., brick and reinforced concrete, built-up roof, pine and maple floors; C. M. Love & Co., 314 S. Henderson St., Fort Worth, Archts.

Tex., Terrell — State Board of Control, Austin, opens bids Dec. 11 for \$100,000 ward building, Terrell State Hospital; 2 stories, 200x125 ft., brick, structural clay tile, structural steel, reinforced concrete, tar and gravel roof, terrazzo and concrete floors; Arthur E. Thomas, Archt., Construction Industry Bldg., Dallas; R. O. Jameson, Struc. Engr., Southwest Life Bldg., and Charles L. Krebs, Mech. Engr., Praetorian Bldg., Dallas.

Virginia — Dept. of Highways, Richmond, opens bids Dec. 10 for construction of concrete bridge over New River at Hall Branch ferry; 1400 ft. of steel trestle on concrete foundation; 16-ft. roadway.

Contracts Awarded

Ala., Birmingham—Christy, Hutchinson & Burton, has contract at \$78,473 for excavating channel of Section 5, Village Creek.

Ala., Birmingham—Jefferson County Board of Education let contracts to A. J. Honeycutt & Co., Birmingham, for: Group 2, \$37,000, 10-room Hueytown elementary school, 2-room Hueytown high school project, 7-room Rutledge school; Group 3, \$25,000, 2-room Minor high school project, 4-room Sandusky negro school, 8-room Hooper City-Sayreton

Selected News Items

Representative of the New Southern Engineering and Building Projects Reported During the Month by the MANU- FACTURERS RECORD DAILY CONSTRUCTION BULLETIN.

school; Bem B. Price, 611 arley Bldg., and E. Van Keuren, 502 Farley Bldg., both Birmingham, are architects.

Ala., Mobile—Mobile Paper Mill Co., Crichton, R. E. Hartman, Pres., let contract to Mobile Steel Co. to erect building for manufacture of white paper products from Southern slash pine; contract for machinery let; expend \$25,000.

Ala., Troy—R. J. Reid Contracting Co., 21st Ave. and 14th St., N., Birmingham, has contract at \$49,576, for distribution system; Christie, Hutchinson & Burton Co., Inc., 115 Third Ave., Birmingham, at \$18,447, for gas plant; work includes approximately 58,000 ft. of 2, 3, and 4-in. c. i. pipe; erect Butane gas storage plant, 8x13 ft. liquid storage tank, 10x47 ft. gas storage tank; install 3 electric driven compressors, gas mixing and automatic control equipment; Charles A. McKeand & Associates, Engrs., Troy.

D. C., Washington—Samuel J. Prescott Co., Inc., 814 Thirteenth St., N. W., has contract for bus terminal near Harrison Sts., for Capital Transit Co., 35th and M Sts., N. W.; 2 stories and basement; 193 x 217 ft.; conc.; rein steel; precast roof slab; built-up and tile roof; incinerator; air compressor; waterproofing; steel sash; metal counters, etc.; A. B. Heaton, Archt., 1211 Connecticut Ave., N. W.

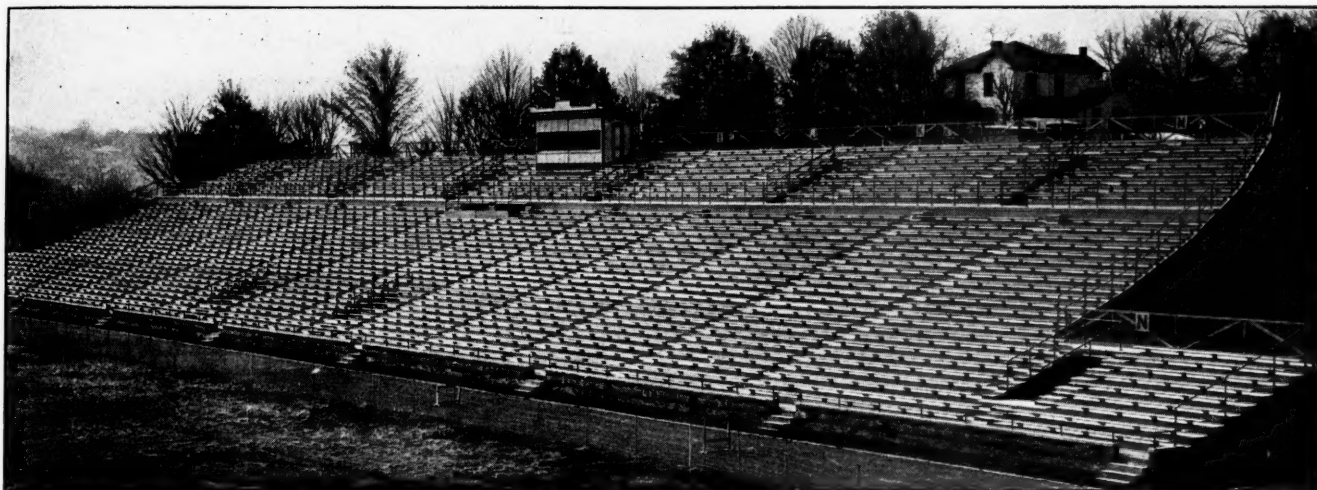
D. C., Washington—Washington Properties, Inc., Wardman Park Hotel, let contract to Davis Wick Rosengarten, 2930 Edgevale Terrace, N. W., for improvements to building northeast corner of Vermont Ave. and K Sts., N. W., for use of federal housing administration; will install air conditioning; expend \$200,000; Porter & Lockie, Archts., Metropolitan Bank Bldg.

Florida — Virginia Bridge & Iron Co., Roanoke, Va., has contract for 700 tons shapes for hurricane gates and navigation lock near Moorehaven, Fla.; Carnegie Steel Co., Pittsburgh, Pa., for 700 tons piling; Kalman Steel Corp., Bethlehem, Pa., for 1028 tons piling; E. H. Latham, Clewiston, Fla., Gen. Contr.

Fla., Clewiston — Arundel Corp., Pier 2, Pratt St., Baltimore, Md., received contract at \$1,800,000 for Sections 2, 3 and 4 levee work on east side of Lake Okeechobee project, totaling 8,000,000 cu. yd.

Fla., Jacksonville—City Comsn. let contract to Atlantic and Gulf Construction Co., for erecting 51,000 bbl. storage tank, for turpentine, at Municipal Docks and Terminals.

(Continued on page 40)



Here is a steel stadium, its deck and seating arrangement almost identical to the W & L Stadium above. But in this case the back and underpart has been utilized for 8 regular-size classrooms, an auditorium, armories, dressing rooms, showers, etc., at a considerable saving for combined facilities. We built this stadium for the Woodlawn High School, Birmingham, Ala.

Seats, and More Seats

A few years ago we built a steel stadium for Washington and Lee University at Lexington, Virginia. Recently they had us enlarge this stadium to provide more seats for their football games. They have been highly pleased with what we have given them both as to design and cost.

Our steel stadium is a steel supporting frame with a steel deck, and then with raised wooden seats on steel brackets. It is a precise, economical and altogether durable design. Incidentally the seat and foot arrangement is the most comfortable that has ever been devised for outdoor stands.

We have built a number of steel stadia of different size and arrangement, some with more architectural treatment than others; some with a watertight deck and the space under it finished up for use as class rooms, dressing rooms, etc. Steel is always the most adaptable construction material, and its use in a stadium enables economies and facilities that cannot be had otherwise and withal a low first cost and low upkeep.

We shall be glad to furnish designs and estimates, or just talk it over, with no obligation whatever assumed or implied.

VIRGINIA BRIDGE & IRON CO.

Roanoke, Birmingham, Memphis, Atlanta, New York,
Los Angeles, Charlotte, Austin, El Paso

Plants at Roanoke—Birmingham—Memphis

**VIRGINIA
BRIDGE**
Steel Structures

Contracts Awarded

(Continued from page 38)

Fla., Jacksonville—U. S. Engr. Office, Jacksonville, let contract to Ingalls Iron Works Co., Birmingham, Ala., at \$70,534, for constructing six 75 ft. barges and to Alabama Drydock and Shipbuilding Co., Mobile, Ala., at \$15,694, for constructing two 60 ft. barges.

Ky., Louisville—J. B. Jennings, has contract for 80x160 ft. addition to plant of Kentucky Macaroni Co., Floyd St. at Southern Rwy. crossing; install heating plant and additional sprinkler equipment; mechanical contracts to be let soon; cost \$22,000; D. X. Murphy & Bro., Archts., Louisville Trust Bldg.

Louisiana—U. S. Engr., Second New Orleans Dist., let following contract for construction levee work in Barataria Levee Dist. and Lake Borgne Levee Dist.: Barataria Levee Dist.—McWilliams Corp., New Orleans Bank Bldg., at \$37,899, for 66,000 cu. yd. Live Oak levee, 145,000 cu. yd. Myrtle Grove levee, 120,000 cu. yd. Upper Orange Farm levee; John Ries, 808 New Orleans Bank Bldg., at \$22,134, for 62,000 cu. yds. Little Texas levee; A. J. Hanson Co., Inc., Alexandria, at \$8610, for 30,000 cu. yds. Nairn-Vaccaro; Edw. E. Morgan Co., Inc., Jackson, Miss., at \$20,608, for 90,000 cu. yds. Kamlah-Henderson Levee, 22,000 cu. yds. Lower Henderson; Schoenberger & Buras, 3128 DeSoto St., at \$19,000 for 70,000 cu. yds. Upper Venice; August A. Buras, 3128 DeSoto St., at \$7962, for 35,000 cu. yd. Venice Levee; Swinney & Coleman, Baton Rouge, at \$13,376, for 28,000 cu. yd. English Turn Levee, 33,000 cu. yd. Belair Levee, 27,000 cu. yd. Upper Pointe-a-la-Hache Levee; Edgar J. Kelly, 3123 Louisiana Ave., Parkway, at \$5916, for 17,000 cu. yd. Davant Levee.

La., New Orleans—Equitable Equipment Co., Inc., 410 Camp St., New Orleans, has contract for installing 25-ton air conditioning system for 3 floors of building 739 Canal St. for Imperial Shoe Store; American Heating and Plumbing Co., New Orleans, second low bidder; Leo S. Weil and Walter B. Moses, Engrs., 427 S. Peters St.

La., New Orleans—McWilliams Dredging Co., 921 Hibernia Bank Bldg., New Orleans, has contract at \$607,100, for dredging approximately 6,500,000 cu. yd. in Whiskey Bay Pilot Channel, St. Martins Parish beginning in Bayou Alabama near its mouth in Atchafalaya River and extending southeasterly about 3 miles to Willow Lake at crossing of Baton Rouge branch of Southern Pacific R. R.

Md., Baltimore—W. E. Bickerton Construction Co., 515 Cathedral St., has contract for addition dryer building for Krebs Pigment & Color Corp., 2001 Benhill St.

Md., Baltimore—Central Automatic Sprinkler Co., Philadelphia, Pa., has contract for sprinkler for plant of Chevrolet Motor Co., Broening Highway near Holabird Ave.; contract for heating not let; Albert Kahn, Inc., Archts.-Engr., New Center Bldg., Detroit, Mich.; Consolidated Engineering Co., 20 E. Franklin St., Baltimore, Gen. Contr.

Md., Baltimore—North-Eastern Construction Co., 6 W. Madison St., has contract for completion of ward addition, \$365,000, and completion of tubercular hospital, \$210,000, at Baltimore City Hospitals; Palmer & Lamdin, Archts., 513 N. Charles St.

Md., Baltimore—Consolidated Engineering

Co., 20 E. Franklin St., has contract for superstructure for 3 additional units at Highlandtown plant of Crown Cork & Seal Co., Eastern Ave and Kresson St.; cost approximately \$100,000; Lucius R. White, Jr. Archt., 10 W. Chase St.

Md., Beltsville—The Lacchi Construction Co., Munsey Bldg., has contract for construction of fruit products laboratory for experimental farm of Dept. of Agriculture; \$105,675, 102 x 52 ft., brick, 2½ stories and basement, stone trim, slate roof, oil burning steam boiler.

Mo., Paris—Chicago Bridge & Iron Works, 37 W. Van Buren St., Chicago, Ill., has contract for 100,000 tank on tower; and E. J. Fischer Co., 4134 Westminster Place, for water main extension.

Mo., St. Louis—M. L. Fleischer, Railway Exchange Bldg., has started work under \$205,000 contract to construct Herzog elementary school, North Point Blvd. and Mimika St.; 11 rooms and kindergarten, brick walls, 2 stories, cork carpet, concrete foundation, wood sash, slate roof, air washed forced ventilation; Ernest T. Friton, Archt., 911 Locust St.

Mo., St. Louis—Board of Public Service let contract at \$245,897 to McCormack-Combs Construction Co., Columbia Bldg., St. Louis, for construction of Hampton Ave. viaduct.

Mo., St. Louis—Board of Public Service let contracts for street work: \$125,023, Perkinson Brothers Construction Co., for River des Peres driveway from Morganford to Loughborough Ave., \$101,825, Stiers Brothers Construction Co., for section from Loughborough to Lansdowne Ave.; reconstructing 13th St., Chestnut to Pine, Stiers Brothers Construction Co., \$5,619.

N. C., Greensboro—Jefferson Standard Life Insurance Co., let to Otis Elevator Co., New York City, contract covering changes in elevator equipment in 18-story office building, cost app. \$90,000; new elevator entrances will be provided.

N. C., Rockingham — Treasury Dept., Washington, let contract to A. Farnell Blair, Carville, La., for construction of post office; \$119,000.

OKLAHOMA — State Highway Comsn., Oklahoma City, let contract to M. E. Gillioz, Monett, Mo., at \$127,171, for bridge in Miami, on U. S. Highway 66; 1.315 miles of roadway, including grading, drainage and paving, to Gaines Brothers, Miami, at \$21,126.

S. C., Greenville—Morris-McKoy Building Co., Greenville, received contract for addition to Greenville General Hospital; \$100,000; J. E. Sirrine & Co., Archts., Greenville.

TENNESSEE—Dept. of Highways and Public Works, Nashville, has let contract to Vincennes Bridge Co., Vincennes, Ind., at \$194,710 for construction of project in Smith County; NRH 262-B, NRM 262-C.

TEXAS—State Highway Comsn., Austin, let contracts for projects in following counties:

Garza—14.7 miles caliche base and triple asphalt surface, from south city limits of Post to Double Mountain fork of Brazos River on Highway 7, Field Brothers, Lubbock, \$133,843;

Lubbock-Lynn—6.8 miles caliche base and triple asphalt surface from Slaton to Garza County line, Highway 7; Field Brothers, \$50,774;

Cherokee—5 miles ore base and road oil

Selected News Items

Representative of the New Southern Engineering and Building Projects Reported During the Month by the MANUFACTURERS RECORD DAILY CONSTRUCTION BULLETIN.

and triple asphalt surface from south of Rusk to Alto on Highway 40; Russ Mitchell, Inc., Houston, \$35,163;

Cherokee—6.6 miles grading and drainage structures from 7.5 miles south of Alto to Angelina County line, Highway 40, James Spencer & Son Construction Co., Cushing, \$48,085;

Hudspeth—9 miles grading and drainage structures from Sierra Blanca southeast, Highway 1; Hannah & Hall, Waco, \$39,097;

Rusk—7.1 miles grading and drainage structures from Tatum, southeast, Highway 43; James Spencer & Son Construction Co., Cushing, \$72,725;

Bell—Lampasas River bridge on Highway, 2; C. W. Gillfillan, Austin, \$46,894;

Lampasas—6.5 miles grading and drainage structures from Mills County line to Lometa on Highway 74-A; Hannah & Hall, \$59,600;

Wood—4 miles iron ore base and road oil surface near Hawkins on Highway 15, Austin Road Co., Dallas, \$29,381;

Gregg—Repairing Sabine River bridge and Sabine slough bridges on Highway 149, Buckner Bros., Cleburne, \$12,678;

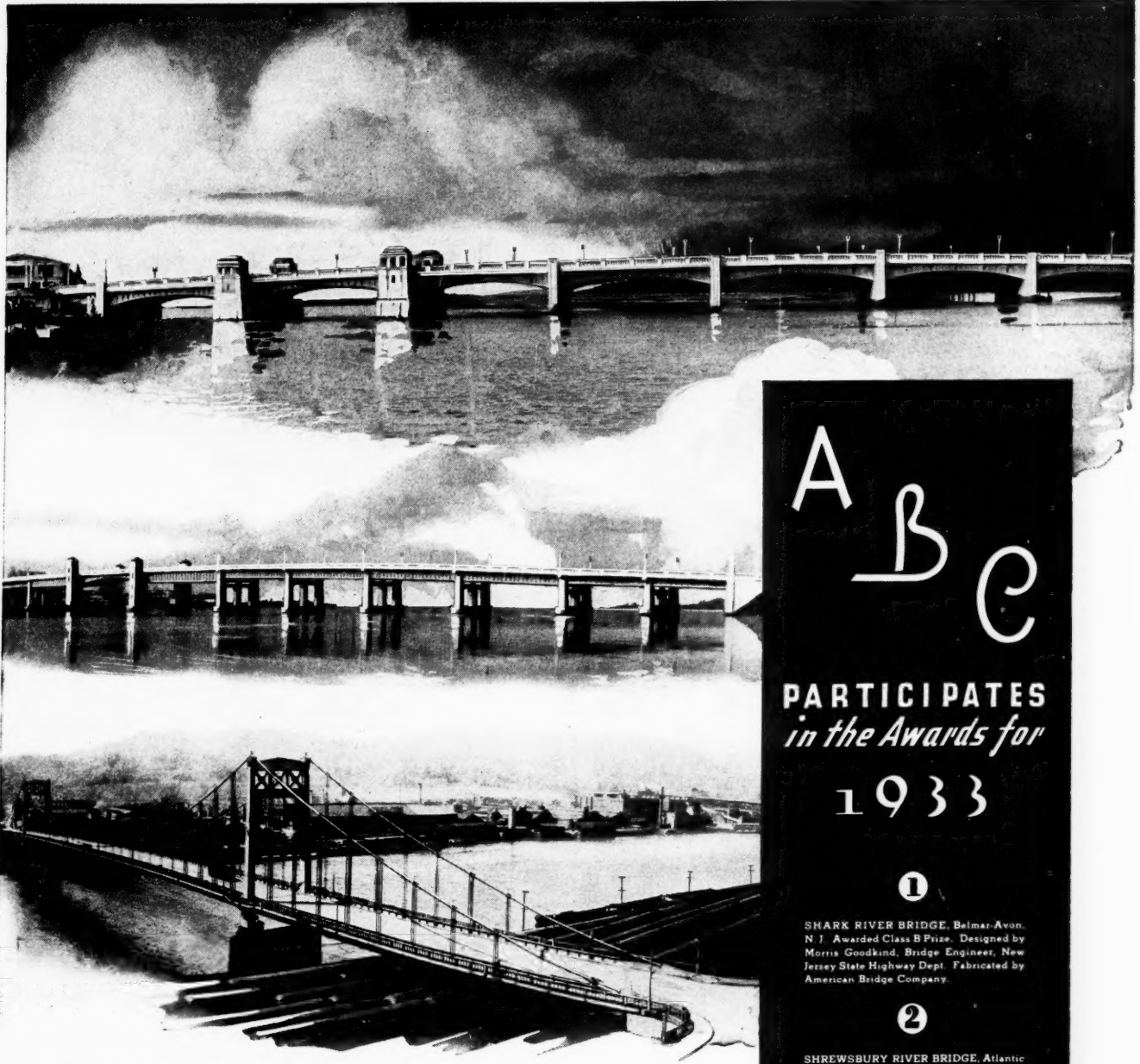
Tex., Dallas—Rosenthal Packing Co., B. H. Rosenthal, 3424 Commerce, let contract to A. K. Garwick, 4414 Worth, Dallas, for erecting \$65,000 plant on 2 acre site Eighth St. north of Corinth; spur track will be built to plant by Texas Electric Railway; Smith, Brubaker & Egan, Archts and Engr., 30 N. La Salle St., Chicago, Ill.

Tex., Houston—Fritz Construction Co. has contract for 3 story, fireproof building, steel and brick, to replace old structure corner of Main St. and Prairie Ave., for Sakowitz Bros., Main at Rusk Sts.; Joseph Finger, Archt., National Standard Bldg.

Va., Blacksburg—Virginia Polytechnic Institute, Dr. Julian A. Burruss, Pres., let contract at \$343,700 to J. A. Jones Construction Co., Charlotte, N. C., for construction of teachers and administration building; Carneal, Johnston & Wright, Archts., 806 Electric Bldg., Richmond, Va.; 162 x 245 ft.; 4 stories and tower; stone.

Va., Clarendon — Shullo Construction Co., Akron, O., has contract at \$124,212, on 8A, trunk line sewer at Four Mile Run, for Arlington County Bd. of Supervisors; Nolan Construction Co., Detroit, Mich., at \$101,849 for 8B.

W. Va., Grafton—Iron City Sand & Gravel Co., Cumberland, Md., awarded contract for 2,000,000 tons of sand and gravel for construction of Tygart River reservoir dam for which Frederick Snare Corp., 114 Liberty St., New York, was low bidder at \$6,305,773 for general construction.



THE three bridges here shown were adjudged meritorious by the jury of the American Institute of Steel Construction appointed to name "the most beautiful bridges of steel opened to traffic in 1933." One was awarded the prize for Class B — bridges costing more than a quarter million and less than a million dollars. The other two received honorable mention in Classes A and B — Class A being made up of bridges that cost more than a million dollars.

"When beauty can be added to strength and permanency—then designer and architect have created in the bridge or other structure a justifiable object for community pride in the completed work."

A B C

PARTICIPATES
in the Awards for

1933

1

SHARK RIVER BRIDGE, Belmar-Avon, N. J. Awarded Class B Prize. Designed by Morris Goodkind, Bridge Engineer, New Jersey State Highway Dept. Fabricated by American Bridge Company.

2

SHREWSBURY RIVER BRIDGE, Atlantic Highlands-Seabright, N. J. Received Class B Honorable Mention. Designed by Morris Goodkind, New Jersey State Highway Dept. Fabricated and erected by American Bridge Company.

3

SOUTH TENTH STREET BRIDGE, Pittsburgh, Pa. Received Class A Honorable Mention. Designed by Geo. Richardson, Bridge Engineer, under direction of then Chief Engineer, V. R. Covell, Dept. Public Works, Allegheny County. Fabricated and erected by American Bridge Company.

AMERICAN BRIDGE COMPANY



SUBSIDIARY OF UNITED STATES STEEL CORPORATION

General Office: Frick Building, Pittsburgh, Pennsylvania

Contracting Offices: Baltimore, Boston, Chicago, Cincinnati, Cleveland, Denver, Detroit, Duluth, Minneapolis, New York, Philadelphia, Pittsburgh, St. Louis, Salt Lake City.

Pacific Coast Distributors: Columbia Steel Co., San Francisco, Calif.

Export Distributors: United States Steel Products Co., New York, N. Y.

IRON, STEEL AND METAL MARKET

WITH buying by the automotive industry showing small gains, with heavier orders booked by manufacturers of farm equipment, and with a sharp pick-up in purchases of tin plate—contrary to normal seasonal trends—conditions in the steel industry at the beginning of December are more favorable.

Over a period of six weeks the rate of production to capacity of the steel industry steadily increased, so that as November closed, operations were at about the 30 per cent mark—meaning, of course, ingot production. Careful observers took occasion to point out that finished steel production, however, was more nearly at a rate of 35 per cent, with various light steel products, such as sheets, strips and tin plate, being turned out at an average rate of more than 40 per cent of capacity.

Tin Plate Active

The main feature of the improved situation in the steel industry is tin plate buying for both domestic and foreign consumption. Export demand has shown strength. Specifications have been rushed to mills by American manufacturers of general line cans, the assumption being that orders were being booked so that domestic consumers might "stock-up" before higher prices on tin plate become effective.

Automotive Steel Sales Gain

Automobile parts and accessories manufacturers are buying in greater volume, and as November closed motor car companies were buying heavier than for some weeks, although it has not yet reached the volume anticipated. The retarded buying of automotive steel is attributed to delays in getting new models into production and to the recent practice of placing orders specifying prompt delivery, which is taken to indicate low inventories.

Miscellaneous and Railroad Buying Lags

A let-down in the demand from miscellaneous small consumers, apparent as December opened—more than offset by heavier purchases by major consumers as above noted—is not considered significant. Normally as the year draws to a close small consumers hesitate to

make purchases, except as absolutely necessary, until after taking inventory. Demand from this source is expected to develop strength after the turn of the year.

With the price of steel rails for delivery until the end of June, 1935, unchanged, there are no inquiries from the carriers as 1934 draws to a close. Most carriers are undertaking only essential replacement and repair work, with little thought being given to future layings.

Recent successful use of alloy steels in high speed railway units may effect sweeping changes in standard equipment design. Coming at a time when much rolling stock is urgently in need of replacement, the new development may result in the adoption of the use of lighter and stronger metal in constructing equipment for the transportation of passengers at high speeds and in the economical hauling of freight.

At the beginning of the month the price of steel scrap was stationary, following successive increases over a period of weeks. The advances may have had the effect of checking demand from domestic steel makers. Meanwhile, export shipments continue to set new high records.

Makers of radiators, heating boilers and sanitary ware have been busier than usual for this period of the year, as the result of the activities of the Federal Housing Administration in arranging for financing of residential modernization. This has stimulated buying pig iron.

Increased Demand for Cast Iron Pressure Pipe

Reversing the seasonal tendency of slack business during November and December, an increasing demand for cast iron pressure pipe is reported in the Birmingham (Ala.) District. This is directly in line with the steady increase in recent months in awards in the South for sewer and water works projects requiring pipe, fittings, valves and like items. A continuance of this business in volume is looked for as the PWA program functions better, and indications are that it will extend over a considerable period. Export business, too, has mounted recently.

Structural steel producers in the Birmingham district are encouraged by

small tonnage contracts coming in from widely scattered towns and cities in the South. This includes steel for bridges, industrial plant structures—new work and additions, Federal power projects, etc. Surveying the building modernization activities of the FHA the American Iron & Steel Institute takes occasion to point out that even though the iron and steel required, for a single modernizing job "may be measured better by the pound than by the ton," that the aggregate tonnage thus needed will be important well into 1935.

Also, "built-in" equipment, financed under the program, includes items which use iron and steel such as plumbing fixtures, incinerators, heating systems, air conditioning units, domestic water heating outfits, automatic stoking and ash removal devices, laundry chutes, fire escapes, elevators, etc. In the electrical field, steel conduit is in better demand.

Third Quarter Operations Conducted at Loss

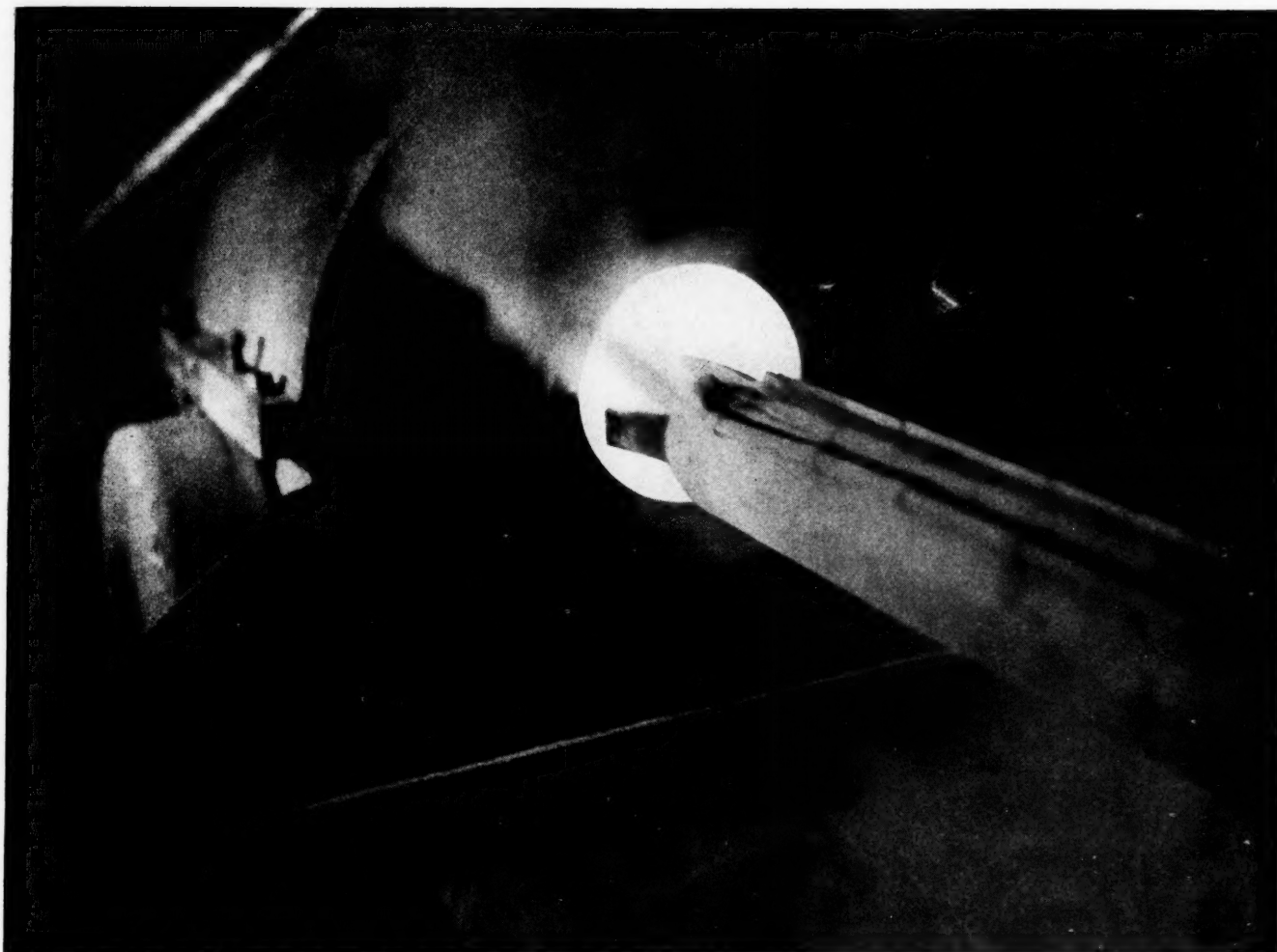
Surveying the third quarter operations of the steel industry the Institute, reports an average loss of \$6.10 on each ton of steel ingots produced was incurred, contrasted with an average profit of \$2.65 per ton produced in the second quarter.

The estimates are based on financial reports made public by 17 companies representing approximately 85 per cent of the steel ingot producing capacity of the country, indicating a total deficit of \$25,000,000 during the third quarter for the entire industry. During the first quarter the industry had a profit of \$24,600,000. For the first nine months of 1934 the indicated deficit is \$8,300,000.

Despite the lower operating rate in the third quarter, average hourly earnings for all steel company employees amounted to 72.7 cents, an increase of 3 per cent over the second quarter's level.

In view of the financial losses suffered by the industry during the current year drastic reductions in steel prices are unwarranted, comments the Institute. The low operating rate is laid at the door of the slump in demand from the so-called durable goods industries—building construction, railroad equipment and similar heavy industries.

impact strength **DOUBLED**



The experience of users for the past twenty months has confirmed in the field what a long succession of tests has consistently proved, namely, that Super-de Lavaud Pipe is endowed with extraordinary resistance to shocks encountered in handling, transportation and service. The impact strength of this pipe is more than double that of the centrifugal pipe we formerly produced. Users also report pronounced increases in toughness as well as ductility. Tests show more than 50% increase in elongation and

notably greater ductility without loss of tensile or bursting strength. These important advantages are the result of a new technique in the centrifugal casting of gray iron, developed and patented by this company, whereby Super-de Lavaud Pipe is cast without chill in a metal mold. *Seven million feet of this pipe have been sold in 20 months.* Send for booklet.

UNITED STATES PIPE AND FOUNDRY CO.
BURLINGTON, N. J.
Foundries and Sales Offices throughout the United States

U.S. SUPER-DE LAVAUD PIPE

CENTRIFUGALLY CAST WITHOUT CHILL IN A METAL MOLD

DECEMBER NINETEEN THIRTY-FOUR

GOOD ROADS AND MOTOR TRANSPORT

Federal Road Building Record

Road construction supervised by the Bureau of Public Roads in the fiscal year ending June exceeded construction in any previous year, says Thos. H. MacDonald, Bureau Chief.

Federal-aid funds paid to States during the fiscal year 1934 amounted to \$42,291,000 and emergency construction funds similarly paid amounted to \$55,669,000. Public works highway funds assigned to the various States amounted to \$394,000,000.

A total of 14,780 miles of Federal-aid roads was completed during the year, bringing the total mileage completed since 1916 to 119,712, more than half of the Federal system designated. The active public works highway program for the fiscal year 1934 totaled 22,378 miles. At the end of June 13,674 miles were in various stages of construction and 1,718 miles were approved for construction.

\$6,785,000 for West Virginia Roads

West Virginia has cut down on its requirements from the PWA and has enlarged its road improvement program. Because West Virginia has been able to sell its bonds to private investors, State officials have requested that the \$5,114,000 PWA allotment for highway improvement be cut to \$2,000,000.

The \$2,000,000 supplied by the Federal Government is to cover the cost of labor and material for an enlarged road program by the State to call for an expenditure of a total of \$6,785,000.

Safer Highways Needed

Safer highways are in greater need in the United States than just more highways, according to V. G. Iden, Secretary of the American Institute of Steel Construction. The elimination of all grade crossings on existing highways, and the removal of these traffic hazards should be considered from the humane viewpoint as well as the economic.

It is stated there are some 240,000 highway crossings with rail lines at grade and not over 30,000 of these are protected by watchmen, gates, or similar means. There are many more dangerous grade crossings between vehicular highways that also might advantageously be eliminated. The removal of these dangers to traffic would not only reduce the loss of life by accident, but also expedite

the movement of traffic, both motor and rail.

The records show that there are approximately 2,000 fatalities yearly by reason of accidents at grade crossings. There are three times as many more injured. This represents a tremendous annual toll. If each life is worth \$25,000 to the State, and represents an insurance settlement of \$10,000 and every injured only \$5,000 in insurance adjustment, the vital loss will exceed \$75,000,000 yearly. These figures do not take into account the tremendous loss in time, represented by delays to traffic at grade crossings, nor the property destroyed in accidents.

To remove all the grade crossings of highways with railways would entail about \$2,400,000,000. Such an investment in the highways of the country would repay the public many times in savings in life and property. In the present national emergency we believe that you might well set aside \$1,400,000,000 from the public works appropriations for these specific projects. Such a sum would provide 9,000,000 man-month's work, which is another way of saying that it would provide a year's employment for 750,000 workers directly and many more thousands indirectly.

Balanced Highway Programs

In an address at the fifteenth annual meeting of the American Petroleum Institute at Dallas, Tex., J. E. Pennybacker, managing director of the Asphalt Institute, New York City, stated that the best way for the petroleum industry to substitute continuing prosperity for a "prince and pauper" reputation would be to achieve tax reductions and sales increases via a balanced highway program. He cited four economic facts as responsible for unbalanced programs as follows: Development of inter-urban traffic largely to the neglect of country roads; highway building with small regard to the relationship between investment and return as compared with the prudence of industrialists who built factories only after a study of markets; the digging up and throwing away of rough and pot-holed macadam and gravel surfaces when a smooth pavement could easily have been imposed upon the traffic-compacted bases, and the building of pavements at great expense from materials hauled by rail long distances when suitable rock or gravel could be had along the right-of-way.

Highway Expenditures

American motorists have more than paid for the cost of Federal-financed highway improvements. The Federal Government has spent \$1,522,000,000 on highways since 1919, and has collected from highway users \$1,664,000,000 in various kinds of special taxes in addition to other taxes levied upon them in common with other citizens.

Calling attention to the foregoing, Baird H. Markham, director of the American Petroleum Industries Committee, New York City, says that in this period the States have spent approximately \$10,500,000,000 upon highways, and have collected from highway users through gasoline and motor-vehicle taxes more than \$7,200,000,000. Twenty-five additional special taxes are levied upon the highway users. Highway users in 1933 alone paid the huge sum of \$1,137,872,000 in special motor-vehicle-user taxes. These taxes will defeat their own ends. The remedy for this situation is not the addition of taxes to taxes or the seeking of untaxed sources of revenue, but in cutting the cost of government.

Hundreds of millions of dollars have been spent, and are being spent, by the Federal and State governments for high-cost road construction where such high-cost construction is not needed. The funds thus unnecessarily expended should have been used to build county or marginal roads of low-cost construction which are badly needed in the rural communities.

Rejects Gas Tax Reduction

Michigan has decisively defeated a constitutional amendment for the reduction of the State gas tax from 3 cents to 2 cents a gallon. The proposal, when it was first advocated, is said to have won support, but when it was learned that the plan would reduce road funds by \$7,000,000 a year, so that virtually no road construction could be carried on with State funds, public opinion was reversed. It was pointed out in the campaign that gas tax rates should be adjusted to road needs and that the tax rate should be sufficient to assure reasonable progress in highway construction.

In connection with the above, it is pertinent to record that legislative measures are being discussed in seven Atlantic Coast states for higher gas taxes and the diversion of a larger share of the taxpayer's money.



for Lower Costs on

- | | |
|-------------------------|----------------------------|
| 1 Highway Construction | 5 Stone & Gravel Handling |
| 2 Clay Digging | 6 Erection |
| 3 Highway Maintenance | 7 Materials Handling |
| 4 Irrigation & Drainage | 8 Miscellaneous Excavation |

● Speed, mobility, versatility—the Austin Convertible Badger has them all. With interchangeable booms it becomes a shovel, trench hoe or any one of five types of crane. With wheel-mounting for transport at motor truck speeds, it becomes whatever is needed for the next job, no matter how far away. The Badger is the handiest tool in the material handler's kit of equipment. Send coupon for details of miscellaneous jobs at low costs.

The Austin-Western Road Machinery Co.

Home Office: Aurora, Illinois Cable Address: AWCO, Aurora
Branches in Principal Cities



Austin-Western

ROAD ROLLERS, CRUSHING & SCREENING PLANTS, SCARIFIERS
SWEEPERS & SPRINKLERS, ROAD GRADERS, ELEVATING GRADERS



MOTOR GRADER
DRAGS, SHOVELS



Above the Austin Badger is shown with shovel boom on a highway maintenance job. Below with crane boom, doing effective dragline work.



The Austin-Western Road Machinery Co.
A-3 Aurora, Illinois.
Please send details on Austin "Badger."

Name _____

Address _____

City _____

State _____

Zip _____

WAGONS



Cletrac Tractors
Sold and serviced in
this territory
by Austin-Western

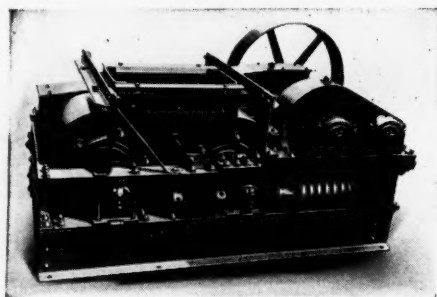
EQUIPMENT

NEW AND IMPROVED

New Austin-Western Roll Crusher

A new reduction roll crusher, built primarily to produce material from 1½" down to dust (though it will handle larger sizes) has been announced by the Austin-Western Road Machinery Company of Aurora, Illinois. According to the manufacturers, it requires less power and since it operates faster (60 R. P. M.) its capacity is therefore greater.

The rolls measure 18" wide by 30" in diameter and are equipped with 2" thick, removable, manganese shells. Each roll



New Western Roll Crusher

is supported by two, large SKF, self-aligning, roller bearings, that rotate on heavy stationary shafts.

All crusher shafts, when operating under load are subject to a certain amount of deflection which if not corrected will cause premature and excess wear or heating; such conditions cannot develop in this crusher because the bearings can never get out of alignment.

Two massive screws (heavy-spring equipped) permit any desired adjustment of rolls and act as safety releases against tramp iron or other uncrushable material.

Belt driven pulley shaft is geared to sprocket countershaft using heavy roller chain to operate the rolls which permits a greater variation in the spread of the rolls, hence a greater variation of finished sizes.

Gearing, sprockets and chain are fully enclosed with heavy metal guards—Ale-mite lubrication is used throughout.

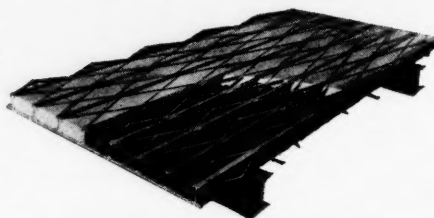
Weatherproof and Dustproof Safety Switches

A new line of weatherproof, dustproof Type A safety switches in standard sizes from 30 amperes to 600 amperes capacity, is being supplied by The Electric Controller & Mfg. Co., Cleveland, O. These switches use the same switch mechanism

that is furnished with the standard EC&M safety switch which is of type A construction and should not be confused with the type C safety switches using lighter construction and which do not have safety interlocks.

I-Grid Steel Flooring

Designed for bridges and heavy duty floors, a strong and light type of steel flooring has been developed by the Truscon Steel Company, of Youngstown, Ohio. This new flooring, known as "I-Grid," is an improved armored surface slab combining all the benefits of ordinary reinforced slabs, it is claimed, with the advantages of extreme lightness in weight and surface of steel and concrete in diamond formation. Through a scientific distribution of steel and concrete, cracks are avoided and wheel loads are given the widest distribution, while the use of top and bottom flanges



Section I-Grid Bridge Floor

of equal area provide a section of practically equal resistance to positive and negative stresses. The wide bottom flanges form a substantial bearing surface upon which the concrete rests and produce an ideal arrangement for resisting punching action in the concrete.

Novo Self-Priming Pump

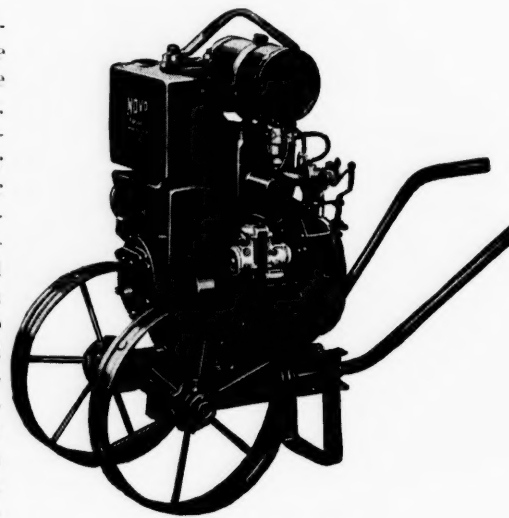
A new 2-inch Self-Priming Centrifugal Pump, known as the Model V-AS-2, is announced by the Novo Engine Company, Lansing, Mich. The pump has a guaranteed capacity of 8500 gals. per hour at 10-foot head, and sells for \$115 on skids, or \$125 on a two-wheel truck. The pump is powered with a Novo 2½ HP Model AG, single cylinder engine, which is water cooled. The pump has no packing. The seal is maintained by two leather seals on the impeller shaft. They require no attention. These seals have been used for over two and one-half years on Novo Self-Priming Centrifugal Pumps and not one has had to be replaced.

2-Yard Convertible Shovel

Designated as Type 801, a new 2-yard heavy duty shovel and 35-ton crane has been announced by The Ohio Power Shovel Company, division of Lima Locomotive Works, Inc., Lima, Ohio, builders of LIMA shovels, draglines and cranes. The new machine is furnished with gasoline, Diesel or electric power and is designed to give low cost yardage. It has an exceptionally short tail swing, with a boom of box type construction, electrically welded. The chain crowd is independent of other motions, and drums are of extra large diameter, while the main machinery, including cone rollers, is equipped with roller bearings. All gears are helical cut for smooth, quiet and long life operation. The machine may be quickly converted in the field into a dragline or crane, and when equipped as a dragline will handle a 3-yard bucket. Bulletin No. 81 presents full details of the unit.

Pulling Jack and Chain Hoist

The "Anchor" puller-hoist, a pulling jack that can be used for overhead vertical lifting, has been developed by the Edelblute Manufacturing Co., Reynoldsville, Pa. It is lever operated, working on a ratchet-toothed chain sprocket wheel, and a load chain with a swivel hook. One man operated, it is automatic reversing and has a hoisting speed of 2 to 4 feet a minute. It has a rated capacity of 1½ tons.



Novo Model V-AS-2

SHOVEL

DRAGLINE

CRANE

LIMA EXCAVATORS

ARE THE STANDARD OF QUALITY FROM COAST TO COAST

THE remarkable savings made by LIMA excavators in operating costs and the splendid yardage records achieved in all kinds of digging is commanding the attention of contractors, quarry operators, sand and gravel producers, etc., from coast to coast.

Performance proves that machines equipped throughout with helical gears, roller bearings at every vital bearing point, drums with extra large diameters, square lever shafts, and independent motions can and will produce greater profits by handling more yardage at less operating costs.

LIMA offers you all of these features of value, quality and economy without additional cost.

THE OHIO POWER SHOVEL COMPANY
DIVISION OF LIMA LOCOMOTIVE WORKS, INCORPORATED
HOME OFFICE LIMA, OHIO FACTORY

NEW YORK 167th Street and Sedgwick Avenue	CHICAGO 1543 Straus Bldg	NEWARK, N. J. 317 Frelinghuysen Avenue	SEATTLE 2244 First Ave. So.	DALLAS 1301 So. Lamar St.
The General Supply Co. of Canada, Ltd. Ottawa, Ont.		MEMPHIS 77 McCall Street	Tyee Machinery Company, Ltd. Vancouver, B. C.	

A TYPE AND SIZE FOR EVERY JOB

CAPACITIES
SHOVELS— $\frac{3}{4}$ yd., 1 yd., $1\frac{1}{4}$ yd., $1\frac{1}{2}$ yd., $1\frac{3}{4}$ yd., 2 yd.
CRANES—12 Ton, 16 Ton, 20 Ton, 25 Ton, 30 Ton, 35 Ton.

LIMA

SHOVELS
DRAGLINES
CRANES
BACKDIGGERS

Business Is Going Ahead

As stated previously in this space, the demand for goods is piling up and the next movement of enterprise will be forward. This bank is prepared to co-operate with sound business in every proper way.

Can we be of service?

Baltimore Commercial Bank

GWYNN CROWTHER, President
BALTIMORE, MARYLAND

Member Federal Reserve System

Electric Bond and Share Company

Two Rector Street
New York

FINANCIAL NEWS

Growing Bank Deposits

Bank deposits are increasing. Many sections are reporting unusual gains. Houston, Texas, announces that a new high mark rising even above the peak of the prosperous years in bank deposits has been attained by its banks. The *Houston Chronicle*, commenting on this fact, says

"We may as well recognize that some of these deposits represent idle money, some of them are parts of increased reserves carried by business concerns to insure their liquidity. Quite possibly we could have more activity and more employment with less money in the bank. Thus our problem, like that of the nation at large, is to create the confidence, to foster the business opportunity that will encourage the individual to experiment and to invest."

The Asheville Citizen speaks of the \$300,000,000 in the banks of North Carolina and says: "the total banking resources of the nation in 1860 were only \$495,000,000."

In South Carolina bank deposits have increased nearly \$2,000,000 a month since June 30.

Government Bonds in Banks

The banks of the country are carrying in their portfolios government bonds to an amount approximating one half of the total government debt. The question of finding an outlet in the shape of sound loans that will use the mounting deposits in banks is becoming every day a more serious matter. For safety and in order to get some return on their money, even though small, the most natural investment is government bonds.

While this is going on the Federal Government as a lender of money to railroads and industry, as well as on mortgages on farms and homes, has taken over a large share of what has been normally a banking function. While the reason for this is understood, nevertheless vast sums have been advanced by the government in this way and, until confidence returns, a major function of the banks seems to be to carry government indebtedness, on which, as stated, their yield of interest is much smaller than it would be in the normal course of business.

The safety back of the loans made by government is just the same as it would be if the loans were in the hands of the banks, although the added security of the taxing power to make up deficiencies rests with government. One thing is clear. The integrity of government is essential from the banker's standpoint if the tremendous investment he has made of other people's money is to be sound.

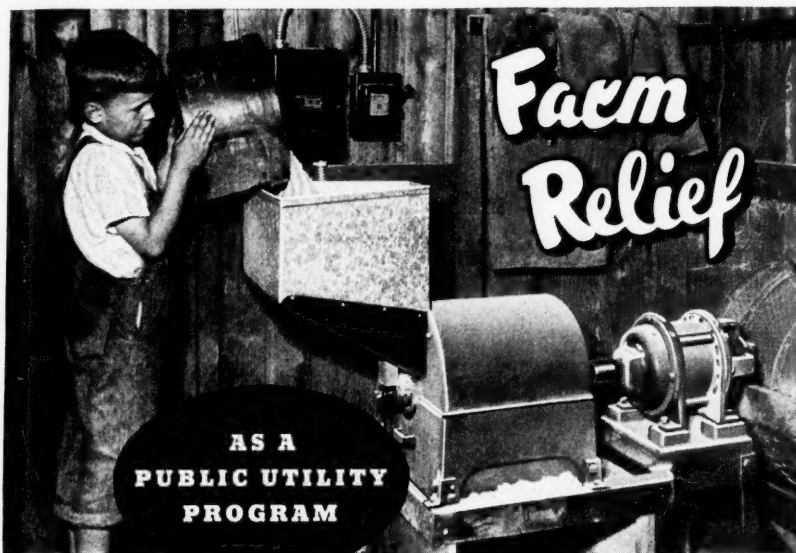
Balances Owed Government

The amounts owed the Federal Government as balances on loans made by the five principal emergency credit organizations are as follows:

Farm Credit Administration	\$2,715,901,691
Home Owners' Loan Corp.....	2,000,000,000
Reconstruction Finance Corp.....	1,280,168,206
Public Works Administration.....	750,000,000
Commodity Credit Corp.....	200,000,000

Of approximately \$4,500,000,000, the total amount loaned by the RFC, about half has been paid and it is stated that profit has accrued of almost \$60,000,000. Security for these various loans include farm crops, mortgages, bank and railroad bonds and collateral, and is regarded in most cases as ample to insure eventual payment.

(Continued on page 50)



Courtesy of Electricity on the Farm

Have you read the discussion of utility security holders' problems in the October Associated Magazine? Copies may still be obtained at 10c each from Associated Magazine, Inc., Ithaca, N. Y.

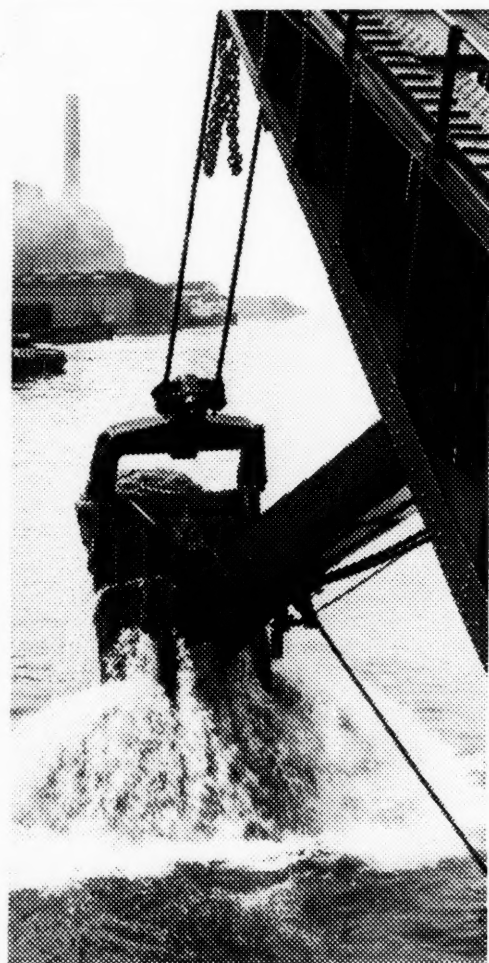
Utilities realize that farm electrification is one of their best fields for service. But their efforts in this direction have been hampered by their inability to raise money for rural line extensions. Increasing taxes, government competition, and forced rate reductions so injure the credit of utilities that investors hesitate to put money into this industry.

Farm electrification is of especial importance to areas served by the Associated System. Of 4,000 communities served, only 86 have more than 10,000 population.



Associated Gas & Electric System
61 BROADWAY, NEW YORK

FARMERS want electricity. Someone has counted 140 ways in which electric power relieves the drudgery of farm work. Yet, only 25,000 farms have been electrified since 1931. More than three times that number were electrified in single previous years. Eighty-eight per cent of all farms are still without electric service from central plants.



In The Development Of Richmond's Port

The second of three projects in the improvement of the James River, the Turkey Island cut-off, was recently completed. In time, the distance from Richmond to the sea will be shortened by some ten miles. Seventy miles of the 25-foot channel to Richmond's terminal have been dredged.

Richmond already possesses many essentials for a port city—a vast inland empire reached directly by five trunk line railroads, well developed industry, abundant supply of fresh water and ample banking facilities available through First and Merchants—first in age; in size; in Richmond.

FIRST AND MERCHANTS National Bank of Richmond

John M. Miller, Jr., President

CAPITAL AND SURPLUS \$4,500,000

Business Is Going Ahead

As stated previously in this space, the demand for goods is piling up and the next movement of enterprise will be forward. This bank is prepared to co-operate with sound business in every proper way.

Can we be of service?

Baltimore Commercial Bank

GWYNN CROWTHER, President

BALTIMORE, MARYLAND

Member Federal Reserve System

Electric Bond and Share Company

Two Rector Street
New York

FINANCIAL NEWS

Growing Bank Deposits

Bank deposits are increasing. Many sections are reporting unusual gains. Houston, Texas, announces that a new high mark rising even above the peak of the prosperous years in bank deposits has been attained by its banks. The *Houston Chronicle*, commenting on this fact, says

"We may as well recognize that some of these deposits represent idle money, some of them are parts of increased reserves carried by business concerns to insure their liquidity. Quite possibly we could have more activity and more employment with less money in the bank. Thus our problem, like that of the nation at large, is to create the confidence, to foster the business opportunity that will encourage the individual to experiment and to invest."

The Asheville Citizen speaks of the \$300,000,000 in the banks of North Carolina and says: "the total banking resources of the nation in 1860 were only \$495,000,000."

In South Carolina bank deposits have increased nearly \$2,000,000 a month since June 30.

Government Bonds in Banks

The banks of the country are carrying in their portfolios government bonds to an amount approximating one half of the total government debt. The question of finding an outlet in the shape of sound loans that will use the mounting deposits in banks is becoming every day a more serious matter. For safety and in order to get some return on their money, even though small, the most natural investment is government bonds.

While this is going on the Federal Government as a lender of money to railroads and industry, as well as on mortgages on farms and homes, has taken over a large share of what has been normally a banking function. While the reason for this is understood, nevertheless vast sums have been advanced by the government in this way and, until confidence returns, a major function of the banks seems to be to carry government indebtedness, on which, as stated, their yield of interest is much smaller than it would be in the normal course of business.

The safety back of the loans made by government is just the same as it would be if the loans were in the hands of the banks, although the added security of the taxing power to make up deficiencies rests with government. One thing is clear. The integrity of government is essential from the banker's standpoint if the tremendous investment he has made of other people's money is to be sound.

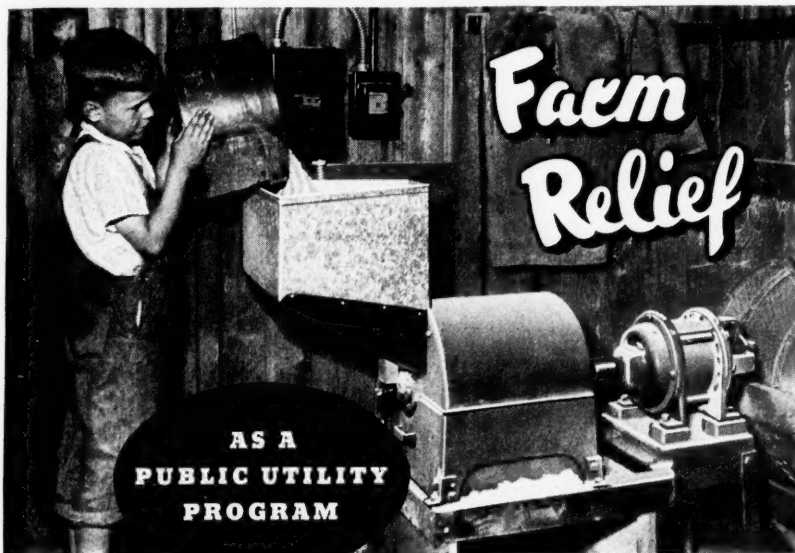
Balances Owed Government

The amounts owed the Federal Government as balances on loans made by the five principal emergency credit organizations are as follows:

Farm Credit Administration	\$2,715,901,691
Home Owners' Loan Corp.....	2,000,000,000
Reconstruction Finance Corp.....	1,280,168,206
Public Works Administration.....	750,000,000
Commodity Credit Corp.....	200,000,000

Of approximately \$4,500,000,000, the total amount loaned by the RFC, about half has been paid and it is stated that profit has accrued of almost \$60,000,000. Security for these various loans include farm crops, mortgages, bank and railroad bonds and collateral, and is regarded in most cases as ample to insure eventual payment.

(Continued on page 50)



Courtesy of Electricity on the Farm

Have you read the discussion of utility security holders' problems in the October Associated Magazine? Copies may still be obtained at 10c each from Associated Magazine, Inc., Ithaca, N. Y.

FARMERS want electricity. Someone has counted 140 ways in which electric power relieves the drudgery of farm work. Yet, only 25,000 farms have been electrified since 1931. More than three times that number were electrified in single previous years. Eighty-eight per cent of all farms are still without electric service from central plants.

Utilities realize that farm electrification is one of their best fields for service. But their efforts in this direction have been hampered by their inability to raise money for rural line extensions. Increasing taxes, government competition, and forced rate reductions so injure the credit of utilities that investors hesitate to put money into this industry.

Farm electrification is of especial importance to areas served by the Associated System. Of 4,000 communities served, only 86 have more than 10,000 population.



Associated Gas & Electric System
61 BROADWAY, NEW YORK



In The Development Of Richmond's Port

The second of three projects in the improvement of the James River, the Turkey Island cut-off, was recently completed. In time, the distance from Richmond to the sea will be shortened by some ten miles. Seventy miles of the 25-foot channel to Richmond's terminal have been dredged.

Richmond already possesses many essentials for a port city—a vast inland empire reached directly by five trunk line railroads, well developed industry, abundant supply of fresh water and ample banking facilities available through First and Merchants—first in age; in size; in Richmond.

FIRST AND MERCHANTS National Bank of Richmond

John M. Miller, Jr., President

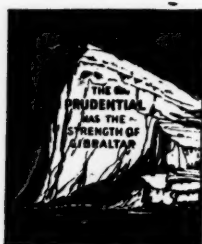
CAPITAL AND SURPLUS \$4,500,000

Your interest in their well being

is shown to employees and
their families when you set
up a plan for

GROUP INSURANCE

*We have information ready for
Employers, on request.*



THE PRUDENTIAL
INSURANCE COMPANY OF AMERICA

EDWARD D. DUFFIELD, President
HOME OFFICE, NEWARK, N. J.

Financial News

(Continued from page 48)

Is Inflation Out?

Mr. Donald Richberg, Director of the Executive Council of the NRA, said in a speech in Atlanta, Georgia, "of all the quack remedies, the worst that is offered * * * is to get drunk again in another orgy of inflation." He insisted that "business must do the job" and "the ground is now prepared for a great advance by private industry." All of which is most heartening to those who are anxious to cooperate in every proper way with right plans of the Government to promote confidence. One of the jobs of government, however, is to get the various agencies to coordinate and cooperate in such plans.

Opposed Housing Plans

Administrator Moffett of the Federal Housing Administration, has directed his huge organization to the task of getting private residential building started at the earliest possible date. To the extent he succeeds, through the cooperation of banks and borrowers, government outlays for a similar purpose will be reduced.

Secretary Ickes, in the meanwhile, proposes an immediate huge outlay for a residence building program of low cost houses, to be financed by government on direct loans, over a long period, at the low rate of 3 per cent. Mr. Moffett is quoted as having stated that this "would knock the packing out of the existing home structures and demoralize the mortgage field."

A later statement from the White House indicates that the differences are to be reconciled. It is clear that the two plans cannot very well proceed with equal satisfaction to borrowers or to the plans' advocates.

Federal Reserve Head

Marriner S. Eccles has been appointed Governor of the Federal Reserve Board. Regarded as a radical by some and an avowed advocate of spending for recovery, he is a successful banker, having been at the head of a group of outstanding Western institutions. His policies, as heard today in contrast with those given out last winter when he appeared at the Senate Banking Committee's hearings, are regarded by conservative interests as liberal but not necessarily radical. His hope is, as noted in the press, to see banks take over more and more of the function of lending to industry, but in the meanwhile that government should take the initiative.

Federal Reserve Loans to Industry

Carl P. Dennett of the Industrial Advisory Committee of the Federal Reserve Bank of Boston, spoke to the business men and bankers of New England the other day about the advantages offered to business concerns by Federal Reserve bank loans. He described the law as offering an opportunity to established business concerns to obtain additional working capital, and also for commercial banks to obtain sound loans of a highly liquid character. Applications should first be made to the borrower's regular bank. "Should this bank not care to carry the whole loan, it may submit the application to the Federal Reserve bank, which will either approve or disapprove it. If approved, the Federal Reserve Bank will either participate to a total of 80 per cent, or make a commitment to take up to 80 per cent of the loan from the commercial bank at any time on demand during the life of the loan."

Christmas Clubs

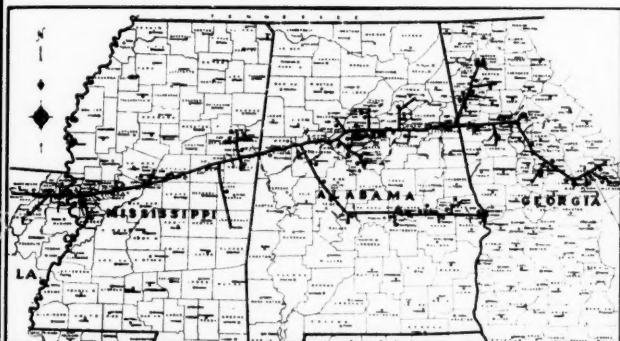
It is estimated that \$370,000,000 will be distributed to 7,500,000 members of Christmas Clubs by 5500 banking institutions and organizations. More than \$50,000,000 will be distributed in the South. The average amount for each member will be \$48.25, and the total distribution represents an increase of 6 per cent over last year.

NATURAL GAS

BEST AND MOST ECONOMICAL FOR

ALL FUEL PURPOSES

CONSULT YOUR
LOCAL NATURAL GAS COMPANY



Southern Natural Gas Corporation
Watts Building
Birmingham, Alabama

Georgia, South Carolina, Tennessee and Alabama
STATE AND MUNICIPAL BONDS.

The Robinson-Humphrey Co.
Walnut 0316 Atlanta, Ga.

CLAY WORKING MACHINERY

For Brick, Tile and Block,
from smallest to largest capacity.

Write for information

J. C. STEELE & SONS, STATESVILLE, N. C.

FARQUHAR

Makes Big Money for Sawmill Operators

For three-quarters of a century Farquhar Sawmills, powered by Farquhar Steam Rigs, have provided EASY, ECONOMICAL, TROUBLE-FREE OPERATION and SURE PROFITS. Write TODAY and Get the New FARQUHAR SAWMILL CATALOG . . . A wealth of valuable information for the sawmill operator—EASY TIME PAYMENTS. Farquhar Distributors in your territory carry new and used machinery. Repairs and supplies.



A.B. FARQUHAR CO., Limited, Box 6M, York, Pa.

SAWMILLS

DECEMBER NINETEEN THIRTY-FOUR

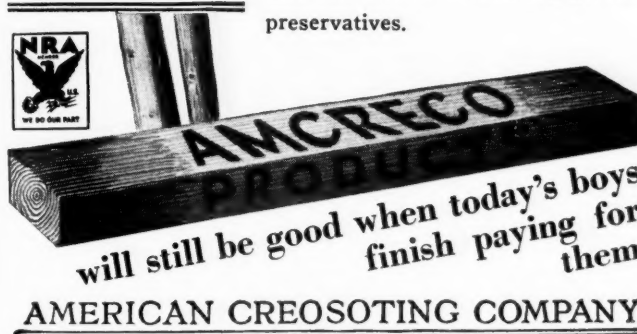


Why make a "TRIAL HORSE" of him

Why
AMCRECO PRODUCTS
have long life and low
annual cost

1. Carefully selected timber.
2. Incipient decay avoided.
3. Framing before treatment.
4. Preservative of known value.
5. Adequate treatment.
6. Treatment accurately timed to proper seasoning.
7. Unequalled facilities and personnel of the leading producer.

in present construction work, part of which he must pay for? Economical, long life materials of known value should be used that the service will exceed the period of payment. Timber well treated with standard preservatives will be sound when he has reached maturity and shares the burden. You want time to vindicate your judgment of materials so you must look to the records of time in selecting proven preservatives.



AMERICAN CREOSOTING COMPANY

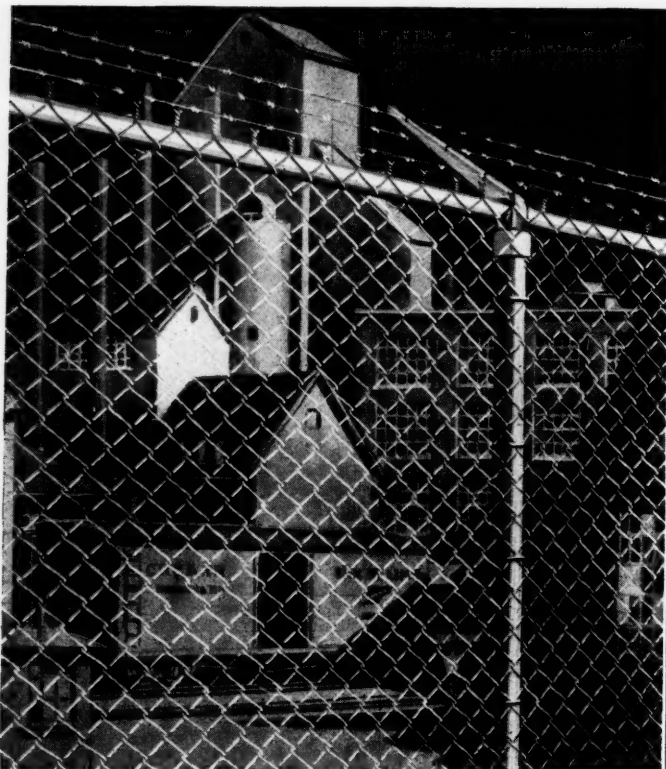
COLONIAL
CREOSOTING
COMPANY
INCORPORATED



GEORGIA
CREOSOTING
COMPANY
INCORPORATED

LOUISVILLE — KENTUCKY

PROTECTED FOR YEARS



By CYCLONE FENCE

NOT ONLY does Cyclone Chain Link Fence assure added safety at a price far below the losses suffered from fire, theft and accident, but it also gives every feature you should demand in a fence.

Consider these advantages: *Exit and entrance* of visitors, employees and trespassers are absolutely within your control, outdoor storage space may be added to your property with security and the possibility of liability suits resulting from accidents to outsiders will be eliminated when your property is surrounded by strong Cyclone Chain Link Fence.

You have no construction worries or problems. The entire job from accurate estimate to final expert erection is carefully handled by the factory trained experts of a Company with a record of nearly half a century of superior service.

Complete information furnished on request. Write for catalog, no obligation. Address Dept. M. R.

CYCLONE FENCE COMPANY

General Offices: Waukegan, Ill.
BRANCHES IN PRINCIPAL CITIES

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

Pacific Coast Division:
Standard Fence Company, General Offices: Oakland, Calif.
Cyclone is not a "type" of fence but fence made exclusively by Cyclone Fence Company and identified by this trade-mark.

Cyclone Fence

REG. U.S. PAT. OFF.



OVER THE EDITOR'S DESK

OCTOBER EXPORTS totaled \$206,352,000, the highest figure for any month since April, 1931. This gave the United States a favorable trade balance of \$76,723,000 for October. Imports were \$129,629,000, compared with \$150,867,000 in October, 1933.

FARMERS of the country have received in excess of \$294,000,000 under government adjustment programs for cotton, tobacco, wheat, corn and hogs. More than \$153,000,000 had been received by cotton growers participating in the Federal rental benefit and curtailment program; \$16,000,000 by tobacco growers; \$70,000,000 by wheat growers, and \$55,000,000 by corn-hog producers. An additional \$300,000,000 is to be paid farmers by the end of the year as the partial distribution of \$799,000,000 in rental and benefit payments due under the 3,000,000 contracts signed by farmers.

This cash paid directly to the farm group has helped to account for part of the increased buying in rural areas. Southern farmers have received more than \$183,000,000.

THE CONSTITUTIONALITY of TVA is to be decided in the Courts. In addition to the suit brought by coal and ice interests of Alabama, which is waiting to be heard, the Edison Electric Institute steps into the arena with a statement, which it hopes may cause the President to change his mind about having plans similar to TVA extended into every state of the Union.

The fundamental question, of direct and personal interest to every American, is the right of government to set up competition with private industry, upon the ground that electricity should be furnished the people of the United States at lower rates. The effect of such a threat upon investments widely held in power company securities has been very marked. It is safe to say that the thinking people of the country are not in accord with the suggestion. A question frequently asked is what enterprise ever has been operated by government without waste of taxpayers' money?

Irrespective of mistakes that may have been made by utilities or holding companies, and undoubtedly there have been mistakes, business generally is opposed to so-called reforms of this kind. Regulate utilities, but keep the government out of it.

SECRETARY OF COMMERCE ROPER gave definite encouragement to workers and employers too when he said in a recent address—"if we wish to exercise the right of not working, that is the right to strike, this right must be safeguarded. But in doing so we should defend the right not to strike, that is, the right to work, without molestation."

Undoubtedly a great deal of the labor unrest and disturbances in recent months have been due to the ambiguous language employed in section 7A of the Recovery Act. Organized labor seized upon it and declared it was "a new charter of rights." The administration, recognizing the handicap upon recovery caused by labor unrest, has been more definite of late in its appraisal of the rights of those who prefer not to join with organized labor, but to work for whom they please when a job is offered.

THE NEW YORK CENTRAL RAILROAD soon will put on the rails a new streamline type of "Hudson" locomotive. Both locomotive and tender have been streamlined in accordance with aero-dynamic practices. A metal hood covers both the

locomotive and tender; only the driving and trailing wheels are partly uncovered to permit oiling. The usual locomotive appurtenances, such as smoke stack, bell, etc., will be so placed as to offer no resistance to the air. It is anticipated that the air resistance, while the locomotive is in motion, will be reduced 35 per cent.

The president of the New York Central, F. E. Williamson, is quoted as saying that it is his belief, notwithstanding recent developments in the use of other fuels, a new day is beginning for the steam locomotive.

WONDERFUL are the ways of Science. The results of chemical research are constantly amazing in the benefits they confer upon human life, as well as the creation of wealth from so-called waste products.

In a recent Bulletin of Arthur D. Little, Inc., "tough glass" is described. In its manufacture the process used to make it reverses the usual procedure. "The glass is heated to the softening point, about 1500°F, and then quickly cooled by an air jet or immersion in oil at approximately 400°F. The exterior layer of the glass is thus quickly solidified, while the interior, cooling at a slower rate, contracts and places compressive forces on the exterior."

Lenses made of this glass, dropped from varying heights up to 10 feet, did not break. A blow 13 times as great as that required to break an ordinary optical lens is necessary to break the toughened lenses. When broken, instead of razor-edge splinters, tough glass breaks into less hazardous pieces with rounded edges. Its value will be found especially when used for industrial goggles, although it is applicable in some cases to regular eye glasses and in several branches of industry, such as gauge glasses for boilers, lamp chimneys, porthole glass, windshields, etc.

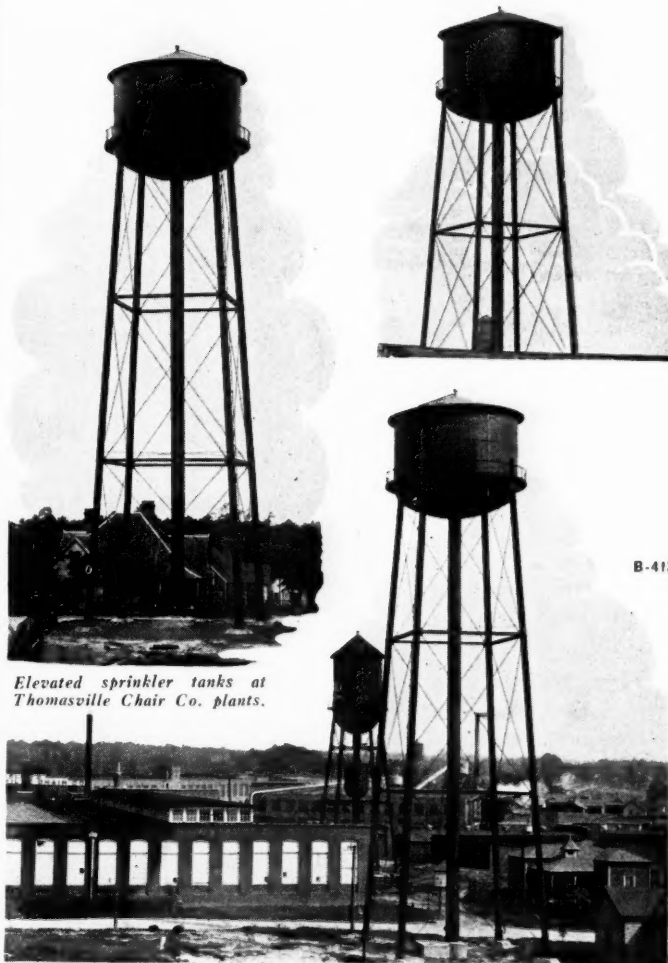
DEPRESSIONS, government control and price fixing are not new or peculiar to America or the rest of the world. Over 4,000 years ago, Assyria had depressions, government control of the copper industry, a gold and silver standard of currency, prices fixed by government, fixed rates of interest and licensed dealers, according to Dr. Julius Lewy, visiting professor of Semitic languages and ancient Oriental history at Johns Hopkins University, Baltimore.

PRODUCTION in Great Britain during the low point of world depression was 17.6 per cent under the peak of 1928. It is now within 2.8 per cent of the 1928 average. As the British Empire Chamber of Commerce says: "In spite of the fact that British business might be better in a more perfect world, this showing is not to cavil at. With 2,000,000 still unemployed, there undoubtedly has been a marked improvement in conditions since the bottom of the depression was passed." On this basis less than 5 per cent of the British people are unemployed as contrasted with approximately 9 per cent out of work in the United States.

British industry, which has shown an upward trend since 1932, continued to advance during the third quarter, the index figure rising to 110, the highest since March, 1930. Manufacturing increased to 118, the highest index number in the whole period of 7½ years for which such statistics have been compiled.

ON THE FRONT COVER this month we call attention to the better sentiment apparent among business men, and at the same time mention deterrents that are bars to recovery. There are others, such as apparent conflict and contradiction in the plans of government agencies. If the Administration would realize that the American people may be talked to frankly without a confusion of terms or the use of words that obscure policies, definite progress will be made.

THREE *New* TANKS for fire protection



Elevated sprinkler tanks at Thomasville Chair Co. plants.

B-413

THE Thomasville Chair Company of Thomasville, N. C. recently installed three additional elevated tanks at its plants for fire protection. These tanks will provide protection day and night.

The instant a fire breaks out, a sprinkler head will open and spray the flames with water, quenching the blaze before it has a chance to gain headway. This type of fire protection is valuable, particularly at night when your plant may not be frequented by workmen.

Write our nearest office for our booklet "Fire Protection" which is sent without obligation.

CHICAGO BRIDGE & IRON WORKS

Birmingham	1530 Fiftieth St., North
Dallas	1208 Burt Building
Houston	2919 Main Street
Tulsa	1611 Thompson Building
New York	3313-165 Broadway Bldg.
Cleveland	2216 Rockefeller Building
Chicago	2106 Old Colony Building
San Francisco	1040 Rialto Building
Havana	Apartado 2507

Plants at BIRMINGHAM, CHICAGO and GREENVILLE, PA.

ARE YOU AWARE THAT—

ALL GOVERNMENT DEBTS amount to \$43,000,000,000, increasing from \$50 per capita in 1913 to about \$344 today. In twenty years taxes have increased 200 per cent, government costs over 300 per cent and public debt 600 per cent while the income of the nation has decreased 7 per cent. It is estimated that every person with an income of \$2,080 a year is paying directly and indirectly about \$480 in taxes.

ALTHOUGH the United States has increased its purchases from abroad by 48 per cent compared with last year, foreign countries have bought only 32 per cent more from us. It is evident that the theory to buy more from foreign countries will enable us to sell more to them is not working out so well in practice. When tourist expenditures abroad and immigrant remittances are included, we have always bought more from foreigners than we have sold them.

COTTON EXPORTS have decreased 44 per cent in the past three months. During the present cotton season, August to October, inclusive, we have shipped

abroad 1,363,000 bales, valued at \$91,899,000, as compared with 2,445,000 bales, valued at \$127,059,000, for the corresponding three months of the 1933 season. This decline in cotton exports brings into question the soundness of the plan being followed by the United States in maintaining an artificially high cotton price and controlled production policy in the face of the cheap cotton competition of foreign countries which are increasing production.

PULPWOOD AND PAPER imports have averaged \$170,000,000 for the past four years, or 70 per cent of our consumption of these forest products. We consume 50 per cent of the world's pulpwood and paper. With Southern pine now available for the manufacture of woodpulp and super-cellulose for rayon making, the United States is assured of a continuous domestic supply and can compete with foreign producers in world markets.

The pulpwood requirements of the world for the making of newsprint are 18,000,000 cords. As the South has 200,000,000 acres of available timber supply,

and with each acre furnishing only one cord of wood, it could supply the world with 200,000,000 cords from its pine forests.

CUSTOMERS of the electric light and power industry in the South now number in excess of 4,481,000 classified as follows: Farm service 119,000; domestic service 3,533,400; commercial users \$11,000; street lighting 10,477; and others 7,200.

COTTON GOODS EXPORTED from Japan increased 166 per cent between 1929 and 1933. American exports of cotton goods declined 46 per cent. During the first half of this year Japanese cotton goods exports were nearly 10 times those of America. Japan increased production and kept prices low; America curtailed production of cotton and artificially raised prices.

PRODUCTION in the durable goods industries for the first nine months of 1934 was 58 per cent of the 1923-25 average. The non-durable goods industries have made a better record, the production for the nine months period being 98 per cent of the 1923-25 average.

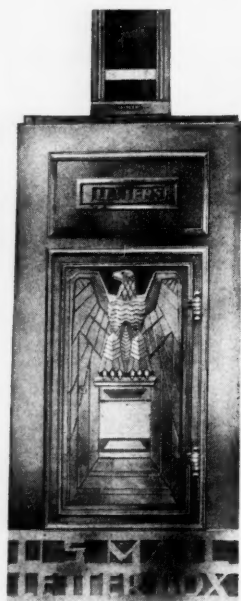
BUILDING PERMITS issued for the first half of 1934 in 54 Florida cities show a gain of 37 per cent over the same period of 1933.

(Continued on page 56)

MODERNIZE

with the

CUTLER MAIL CHUTE



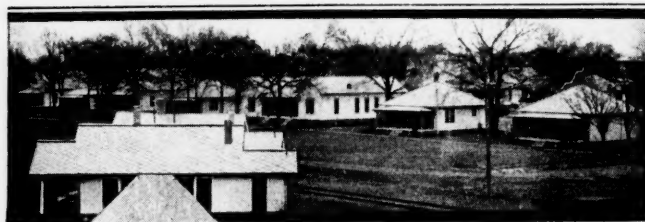
Over fifty years of experience and improvement in Manufacturing Equipment, Product and Service have made the Cutler Mail Chute an outstanding *Hall-mark* of progressive management in office buildings, hotels and apartments.

It is an indispensable feature of the equipment of Public Buildings.

Information and details furnished on request.

CUTLER MAIL CHUTE CO.

General Offices and Factory, ROCHESTER, N.Y.



Because of their known durability, economy and fire-proof qualities The Standard Pipe Line Co., Shreveport, La.; used 96,800 square feet Eternit Hexagonal Asbestos Cement Shingles on 48 Mill Cottages.

48 MILL COTTAGES

RU-BER-OID ROOFED

SOUTHERN Mill Owners have for years entrusted their roofing problems to RU-BER-OID Products. Built-up roofs for industrial buildings, asbestos or asphalt shingles for schools, churches and employes' homes. Each RU-BER-OID product is the best your roofing dollar can buy—a quality standard that has won confidence of the foremost leaders of industry. Samples and literature upon request. Address

The RUBEROID Co.

ROOFING MANUFACTURERS FOR OVER FORTY YEARS

RUBEROID — CONTINENTAL — SAFEPAK

WATSON — ETERNIT

Offices and Factories: New York, N. Y.—Chicago, Ill.
Millis, Mass.—Erie, Pa.—Baltimore, Md.—Mobile, Ala.

one
world
bine

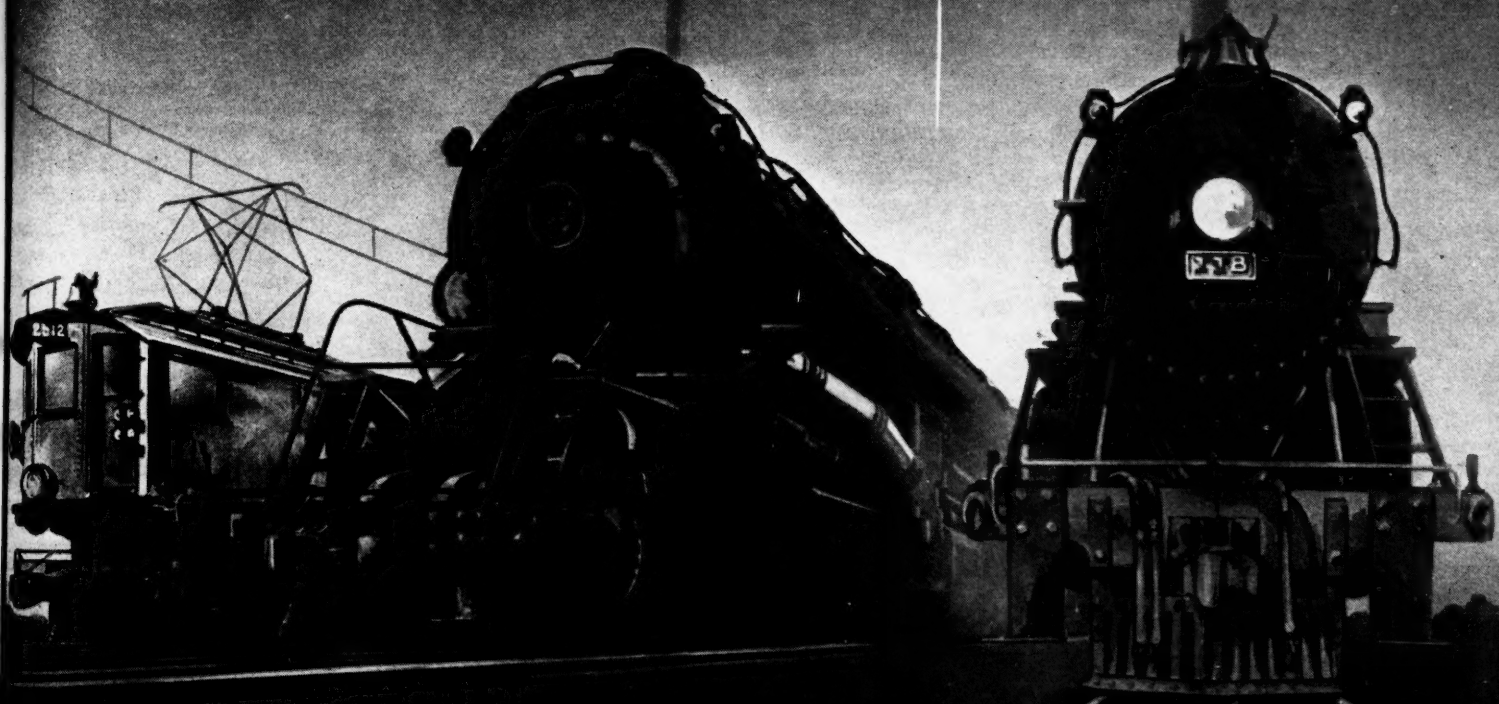
ght
now
fied
nes-
ers
ers

om
een
cot-
ing
ton
ose
ion
led
lly

ods
of
-25
us-
ro-
ng

he
les
he

Merry
Christmas



NORFOLK AND WESTERN
RAILWAY

PRECISION TRANSPORTATION

Are You Aware That—

(Continued from page 54)

HALF of the commercial fertilizers consumed in the United States are used on Southern farms. About 30 per cent of all fertilizers consumed in the South are used in connection with cotton growing.

FARMERS SHARE of the nation's income is now above 9½ per cent. In 1850, when 63 per cent of the population was occupied in agricultural pursuits, farmers received 35 per cent of the nation's income; in 1900, with 36 per cent of the population on the farms, the farm share of the nation's income was 20 per cent; in 1920, with 26 per cent of the population on farms, the farm share dropped to less than 8 per cent. At present it is estimated that between 23 and 25 per cent of the population is engaged in agriculture and the farm share of the nation's income between 9½ and 13 per cent.

PETROLEUM FROM COAL will be produced early next year by the Imperial Chemical Industries at its new Billingham, England, plant. The National Coke and Oil Company, Manchester, is preparing to establish a plant to extract oil from coal and manufacture smokeless fuel.

FLORIDA, in adopting a constitutional amendment last month, becomes the first State to exempt homes up to an assessed value of \$5,000 from taxation. It is reported that steps will be taken in Florida to obtain a constitutional limit on the total of all property taxes.

CITRIC ACID is being made from the coarser grades of tobacco in Russia. Yields up to 11 per cent in the form of a salt are obtained.

THE PURCHASING POWER of cotton farmers for 1934 is about 94 per cent of the 1909-1914 average. In 1932, due to low prices, the purchasing power of farmers' cotton was less than 50 per cent of the pre-war years.

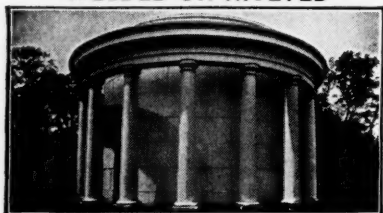
NATURAL GAS CONSUMED in the United States in 1933 amounted to 1,553,000,000,000 cubic feet about the same as in 1932, but there was a gain in the use of natural gas for industrial purposes. The South produced 1,068,997,000,000 cubic feet of natural gas or 69 per cent of the country's total and used 908,000,000,000 cubic feet or 59 per cent of the country's total consumption.

FLORIDA has 1,307 hotels, 4,267 apartments, 2,082 rooming houses and 441 boarding houses listed by the Florida State Hotel Association, or a total in excess of 8,000 housing units under these classifications.

TAXES now amount to more than 12 per cent of the gross operating revenue of private (commercial) electric light and power enterprises in the United States. The Electric Light and Power industry only expended \$129,000,000 for construction and improvements in 1933 as compared with \$285,000,000 in 1932 and \$750,000,000 for the 10-year average of 1922-1932. The peak of construction in the electrical industry was reached in 1930 when \$919,000,000 was expended.

THE UNITED STATES has not maintained its position as a permanent operator of ships in foreign trade. By 1940 nearly 90 per cent of our foreign trade tonnage will be obsolete. A modern vessel may be accepted as one not over ten years old. Only 11.6 per cent of the American owned fleet of 7,840,000 total tonnage has been built within the last ten years, while from 21 to 45 per cent of such vessels for other nations have been built during the same period. Germany led with 45.8 per cent of new tonnage, Great Britain 44.8 per cent, Italy 31 per cent, France 29.6 per cent and Japan 21.6 per cent. Great Britain since 1923 has built 7,644,000 gross tonnage and now owns a fleet with a total gross tonnage of 17,081,000. Great Britain has built more merchant ships in the last ten years than the total tonnage of the American merchant marine.

SOUTHLAND PRODUCTS —WELDED OR RIVETED—



Million gal. Tank at White Sulphur Springs, W. Va.

CHATTANOOGA BOILER & TANK CO.
CHATTANOOGA, TENN.

We now manufacture and offer to the trade tanks in all sizes for pressure or gravity work. Also other steel equipment of either

**WELDED
OR RIVETED
CONSTRUCTION**

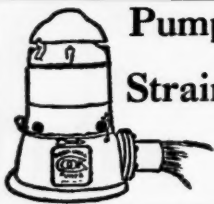
This applies to field as well as shop built equipment.

Write us for information and quotations.

STEEL PLATE CONSTRUCTION TANKS STACKS DREDGE PIPE

Acid Tanks	Digestors	Jacketed Tanks	Settling Tanks
Breechings	Dryers	Molasses Tanks	Standpipes
Condensers	Filters	Oil Storage Tanks	Stillers
Coolers	Gasoline Tanks	Pressure Tanks	Vacuum Tanks

LANCASTER IRON WORKS
LANCASTER, PA.



**Pumps—Deep-Well Plunger and
Turbine
Strainers—and other well supplies**

WATER PRESSURE SYSTEMS
A. D. COOK, INC.
Lawrenceburg, Indiana

Filtration and Pumping Equipment

**For Water Works and Swimming Pools
Sales and Installation**

BURFORD, HALL AND SMITH
140 Edgewood Avenue, N. E.,
Atlanta, Georgia

WATER FILTERS

Pressure and Gravity type for Municipal Water Supplies, Rayon Manufacturing Plants, Textile Finishing Establishments, Raw Water Ice Plants, Laundries, Etc.

ROBERTS FILTER MANUFACTURING COMPANY
684 Columbia Avenue
Darby, Pennsylvania

Water Purification Plants

Any Type—Any Purpose—Any Capacity

Dry Chemical Feed Machines
Swimming Pool Filters

E. W. BACHARACH & CO.
Rialto Bldg.
Kansas City, Mo.

**SEWER PIPE
CULVERT PIPE
DRAIN TILE
WALL COPING
METER BOXES**



**FLUE LINING
SEPTIC TANKS
FIRE BRICK
GRATE BACKS
FIRE CLAY**

We solicit your inquiries
LEE CLAY PRODUCTS COMPANY
CLEARFIELD, Rowan County KENTUCKY

♦ C O L E ♦



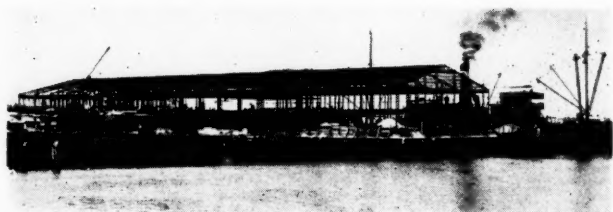
500,000 Gallon Tank

erected for City of St. Petersburg, Fla. Cole tanks both in design and workmanship offer very distinctive advantages. They embody the most revised requirements of all insurance authorities.



R. D. COLE MANUFACTURING CO.

Established 1854
NEWNAN, GA.



REFRIGERATION TERMINAL

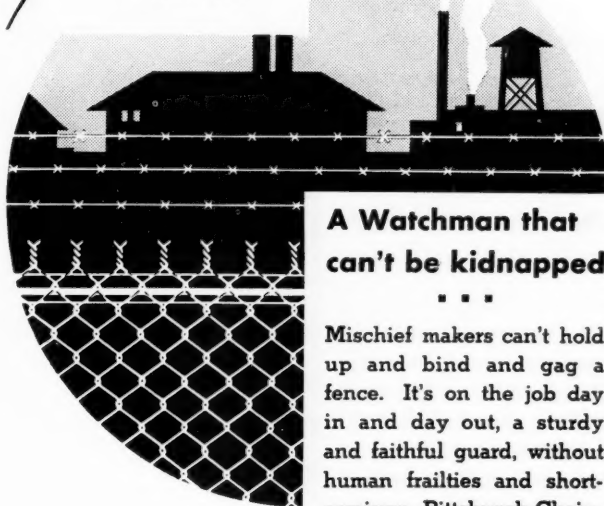
Floating Equipment

Approximately 600 tons of Ingalls structural steel was used in the Indian River Refrigeration Terminal at Ft. Pierce, Florida, view of which is shown above while under construction. Write Ingalls for attractive prices on structural steel for buildings and bridges . . . also on Steel Barges, Scows, Lighters, Pontoons, Dredges and commercial boats of all kinds for Gulf Coast or Inland Waterways.

The Ingalls Iron Works Company

Main Office and Plants: Birmingham, Ala.
Eastern Plant: Verona, Pa. (in Pittsburgh Dist.) Branch Sales Offices:
New York, New Orleans, Tampa

Pittsburgh Fence



A Watchman that can't be kidnapped

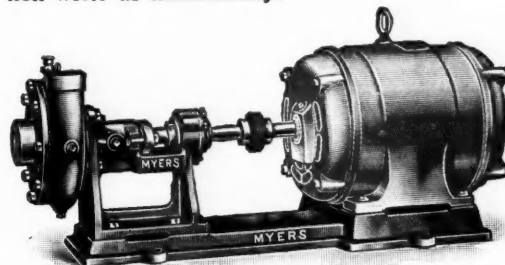
...
Mischief makers can't hold up and bind and gag a fence. It's on the job day in and day out, a sturdy and faithful guard, without human frailties and shortcomings. Pittsburgh Chain-Link Fence is made to give many years of trouble-free service. A "Pittsburgh" representative will be glad to estimate the cost of fencing your property without any obligation on your part.

PITTSBURGH STEEL COMPANY
753 Union Trust Bldg., Pittsburgh, Pa.

OUTSTANDING PERFORMANCE!

Again Myers engineers have triumphed in the development and introduction of Myers Centrifugal Pumps. Precision, balance and smoothness of operation are matters of record. High efficiency and absolute dependability are thoroughly established. Performance has been outstanding. Users everywhere report complete satisfaction. This briefly, is the answer to the success of Myers Centrifugal Pumps and their rapid acceptance by industry and agriculture the country over.

Our new Centrifugal Pump Catalog, No. CT34, is complete with illustrations and descriptions of the different styles and sizes in which Myers Centrifugal Pumps are now built. If you have not received a copy and desire detailed information write us immediately.



THE F. E. MYERS & BRO. CO.
ASHLAND, OHIO.

« « LETTERS FROM READERS » »

Time for Business Men to Speak Out

C. W. HUTCHINSON, INC.
Automatic Sprinkler Systems and Devices for Extinguishing Fires, Jobbers of Fittings, Pipe Valves, Hangers, Gravity and Pressure Tanks
Huntington, W. Va.

EDITOR MANUFACTURERS RECORD:

For a number of years we have been interested readers of your magazine. Generally speaking, we have always found your views sound and we especially want to compliment you on your editorial in the November issue, entitled "What Are We Facing?"

I think it is time the American business man lets his voice be heard in governmental affairs. I have been through the South several times in the last couple of years and I certainly can agree with you that the business men of the Democratic solid South are not sold on the so-called New Deal.

If the average business organization's requirements were as unfair and unethical as the requirements of the average government specifications and contracts, I am afraid there would not be very many concerns doing business.

I hope that you will continue your strong editorial policy along this line.

C. W. HUTCHINSON,
President

Improving Marketing Facilities

JOHNSON-DALLIS COMPANY
Atlanta, Ga.

EDITOR MANUFACTURERS RECORD:

I read with much interest the very interesting and enlightening story, "Railroads and National Progress," by President L. A. Downs of the Illinois Central System in the November MANUFACTURERS RECORD. Mr. Downs' continued interest in improving marketing facilities for Southern products and Southern industries is certainly receiving the commendation of all who have the South sincerely at heart.

I was particularly interested in that statement with reference to the mineral output of the South, for I believe that Georgia leads the Southern States in the diversity of its mineral products, and of these nothing is more outstanding than Georgia marble.

I find the MANUFACTURERS RECORD a veritable storehouse of information at all times concerning the South.

ERNEST E. DALLIS

Experiments Have Gone Far Enough

REYNOLDS BROS. LUMBER COMPANY
Albany, Ga.

EDITOR MANUFACTURERS RECORD:

Permit me to thank you for the articles in your November issue. You are always in step with the viewpoint of the average business man.

You are to be commended for the unselfish effort which you are putting forth to express what, in reality, is the judgment of not only representatives of the industry but the rank and file whom we contact from day to day.

In my opinion, the experiment has proceeded quite far enough and a demand for a change in the procedure is quite opportune.

G. E. REYNOLDS,
General Manager

Straight Thinking and Frank Statements

GEORGE IRVING
Investment Securities
New Orleans, La.

EDITOR MANUFACTURERS RECORD:

I read with a great deal of interest the article in your October issue by L. F. Loree on "Democracy or Destruction."

Mr. Loree is to be commended on his straight thinking and frank statement of his thoughts. You are to be congratulated on having the opportunity of publishing this article at a time when your readers need to receive the expression of thoughts by men who have accomplished so much for our present generation.

GEORGE IRVING

Louisiana and Mississippi State Bonds

SCHARFF & JONES
Investment Securities
New Orleans, La.

EDITOR MANUFACTURERS RECORD:

We shall continue to send you notice of our offerings on municipal obligations of the States of Louisiana and Mississippi. As to our views on the effect of the offerings of the securities by the Reconstruction Finance Corporation, we believe that their activities up to the present time have been handled to everyone's satisfaction. We believe they are interested in endeavoring to keep the mar-

ket from being flooded with offerings and are only offering bonds that will sell.

Regarding the difference between the price of State of Louisiana obligations and State of Mississippi obligations, the present political administration in Mississippi, under Governor Sennet Connor, from its inauguration has done everything within its power to maintain the credit of that State. Mississippi securities, during the latter part of the previous administration, were selling at ridiculous prices, but since the present administration has taken office, the market has continued to advance from about a 7 per cent yield to about a 4 per cent yield in the State's favor. We attribute most of this to the reduction in expenditures on the part of the State and the placing of a general sales tax. This general sales tax produces a substantial sum for the State, and the bonds are well received in Mississippi. As a matter of fact, all of the State's bonds sell at a better price in the State of Mississippi than elsewhere. This in itself, goes a long way toward making a good market for the bonds.

Regarding State of Louisiana bonds, needless to say that political activities caused more sellers than buyers and when this condition exists, the price goes down.

We do not believe it is the intention of the present administration to do anything directly to impair the credit of the State bonds. This was demonstrated with the Special Session of the Legislature just closed, declaring moratorium throughout the State on private debts. This moratorium law was amended to specifically exempt State and Municipal bonds from the moratorium and also specifically exempts taxes from the provisions of the law; and as this same session of the Legislature adopting a State income tax law, it specifically exempts State and political sub-division bonds from the income tax. Since all of the State of Louisiana bonds have been and must be authorized by constitutional amendments to be voted on throughout the State and as each bond issue now outstanding has dedicated to its payment a primary fund, such as the operation of the Port for the Port bonds, gasoline taxes for the highway bonds, etc., and as these funds have been more than sufficient to service the bonds, the political situation, really does not affect them intrinsically.

EDWARD JONES, Vice President.

Certain-teed

Presents
"MILLERIZING"



A Scientific Process That Means Longer Life in the Roof.

Every manufacturer wants the assurance of long life in the roof. The way to get this assurance is to insist upon Certain-teed "Millerized" Roll Roofings, Shingles and Roofing Felts.

This is a scientific, patented process which saturates every fibre of the roofing felt with asphalt more thoroughly and uniformly than any other process. Our nearest Sales Office will be glad to demonstrate this process or send you complete literature on the subject.

Atlanta, Georgia, 1111 Rhodes Haverly Bldg.
Baltimore, Maryland, 1414-15 Lexington Bldg.
Richmond, Virginia, Ninth and Main Streets

Southern Plant Located at Savannah, Georgia

CERTAIN-TEED PRODUCTS CORP.
GENERAL OFFICES—NEW YORK, N. Y.

FIRE CLAY, SEWER PIPE, FLUE LINERS and WALL COPING

Write for Catalogue and Discounts

Owensboro Sewer Pipe Co. Owensboro, Ky.

CONVERSE BRIDGE & STEEL CO.

Chattanooga, Tennessee

Structural Steel for all Industrial Structures, Buildings and Bridges.

LARGE STOCK FOR IMMEDIATE SHIPMENT

BELMONT IRON WORKS

PHILADELPHIA NEW YORK EDDYSTONE
Southern Sales Offices, Charlotte, N. C.

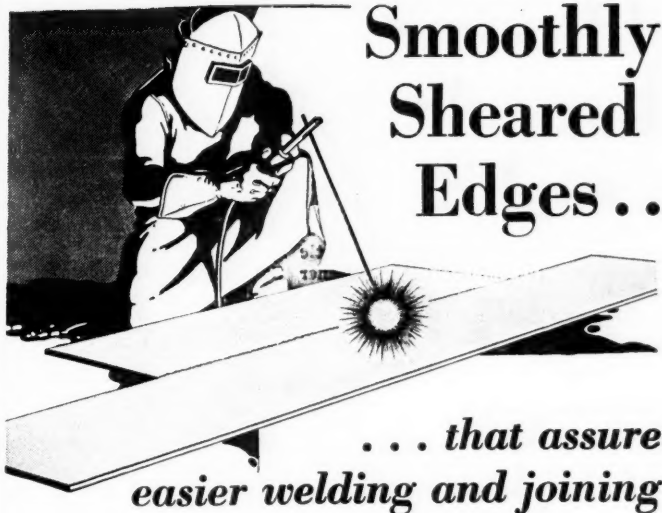
Engineers . Contractors . Exporters

STRUCTURAL STEEL
BUILDINGS AND BRIDGES
RIVETED-ARC WELDED

BELMONT INTERLOCKING
CHANNEL FLOOR

Write for Catalogue

Main Office—Philadelphia, Pa.
New York Office—44 Whitehall St.



The superior quality of GULFSTEEL Precision Plates becomes apparent when fabrication begins. Their accurate and uniform thickness, their even, snug-fitting edges, their neatly sheared ends—expedite welding and riveting. Send us your inquiries for sheared and universal plate.

GULFSTEEL

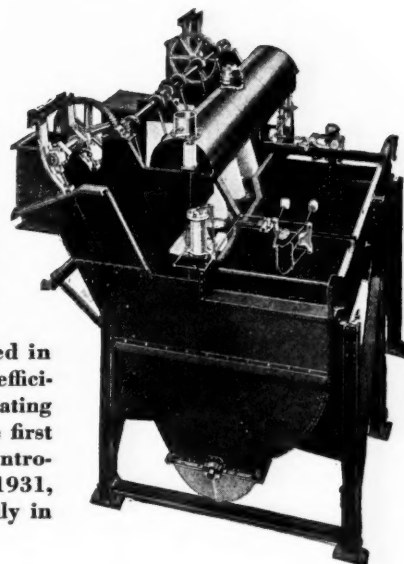


PRECISION

PLATES

are used in the fabrication of the wash-box of the Norton Automatic Coal Washer, manufactured by the McNally-Pittsburgh Mfg. Corp., of Pittsburgh, Kansas.

Already recognized in England as the most efficient method of separating refuse from coal, the first Norton Washer was introduced in America in 1931, and has gained steadily in popularity.



GULF STATES STEEL COMPANY
BIRMINGHAM, ALABAMA

INDUSTRIAL NEWS

Link-Belt Acquires Modern Coal Burner

Manufacturing and sales rights to the Modern Coal Burner, an automatic stoker, made by the Modern Coal Burner Co., a subsidiary of the Peabody Coal Company, have been acquired by the Link-Belt Co., Chicago. It will be added to the Link-Belt line of automatic stokers which are made in sizes from household use to 250 B.H.P.

Increased Sales

By developing new and improved products to take advantage of repair and modernization markets, The Ruberoid Co., Boundbrook, N. J., has increased sales. The better demand for wood-textured asbestos-cement shingles and siding materials induced the Company to build another new plant at Boundbrook, which is in full operation. Due to improved business conditions and the progress made by the company salary increases up to 15 per cent for over 400 employees have been given to offset reductions in 1932.

Sale of Unclaimed Freight

A special lot of unclaimed electrical machinery will be offered for sale at public auction by the Seaboard Air Line Railway Co. Included in the sale, which is to take place on December 12 at Monroe, N. C., are four electric motors, one electric transformer and one air compressor now in the ware-

house of Davis-Williams Co., adjoining the tracks of the Seaboard Air Line Railway.

Link-Belt Increases Southern Facilities

As evidence of its faith in the industries of the South and to render more efficient service, the Link-Belt Company has acquired the plant of the Bailey-Burruss Company at Atlanta, Ga. It is to be known as the Atlanta plant of the Link-Belt Co. and will serve as the distributing warehouse for conveying and power transmitting equipment.

Acme Steel Representative

G. R. Easley has been appointed sales representative for the Acme Steel Company in South Carolina, with headquarters at 107 Manly Street, Greenville. A complete stock of Acme bale ties, seals, buckles, and steel-strap located in Greenville, insures prompt deliveries.

American Rolling Mill Atlanta Office

The American Rolling Mill Company, Middletown, Ohio, announces the establishment of a new sales office in Atlanta, Ga., at Room 1437, Citizens and Southern National Bank Building, in charge of C. M. Broome, Jr., Assistant District Manager. The new Armco sales office will serve the states of Florida, South Carolina, Alabama, Georgia and parts of Tennessee and North Carolina, territory formerly covered by the Middletown District Office.

New Protective Coating

Under the trade name **Plicote**, a new protective coating has been developed by the Watson-Standard Company, Pittsburgh. It is said to be tasteless, odorless and non-toxic and in all laboratory tests Plicote has shown a remarkable resistance to chemicals, withstanding 50 per cent caustic solutions at high temperatures, brine and fruit acid reactions. It has a wide variety of applications such as painting of concrete floors, etc.

"Caterpillar" Diesel 40 Tractor

The Diesel 40 tractor, recently announced by the Caterpillar Tractor Co., has increased power and strength and greater operating economy, according to the manufacturers. It has a 3-cylinder Diesel engine developing 44 h.p. at the drawbar and 49 h.p. on the belt. The Diesel 40 is built to pull a 6-8 yard wagon or a 7-8 bottom plow under difficult conditions. The frame is drilled for mounting such equipment as bulldozers, trailbuilders, hoists and side booms.

Completes New Installation

F. D. Sullivan, president of The Sullivan Company, Memphis, Tenn., announces the installation of modern machinery in their new factory at Memphis which is now operating at capacity. They were forced to stop operations for a number of months owing to the dismantling of their old factory, to make room for one of the large CWA projects. Sulco products, Konset for concrete; Sealit transparent waterproofing for walls; Kant-Leak for roofs; Komix admixtures and other building products are known in the construction field throughout the world.

(Continued on page 62)

Bristol Steel & Iron Works, Inc. STRUCTURAL STEEL

For Bridges, Buildings and All Industrial Purposes

Steel Plate and Miscellaneous Iron Work
Complete Stock Shapes, Plates, Sheets and Bars for
Immediate Shipment

BRISTOL, VIRGINIA-TENNESSEE
"SAVE WITH STEEL"

STRUCTURAL for BUILDINGS STEEL and BRIDGES

Capacity 1000 Tons per Month. 3000 Tons in Stock

Carolina Steel and Iron Company

The Largest Steel Fabricators in the Carolinas
Greensboro North Carolina
Sales Office: 709 Nissen Bldg., Winston-Salem, N. C.

Snead Architectural Iron Works

STRUCTURAL STEEL
ORNAMENTAL IRON

LOUISVILLE, KY.

AUSTIN BROTHERS BRIDGE CO.

Structural Steel and Ornamental Iron
Bridges, Reinforcing and Guard Fence

ATLANTA, GEORGIA
Oakland City Station

CENTRAL-IZE . . . for quality

Laboratory Guidance
plus
Mechanical Control
plus
Expert Supervision

=

"CENTRAL"
QUALITY
STEEL

Billets ~ Plates ~ Sheets ~ Flanged and Dished Heads ~ Floor Plates ~ Stampings

IN STANDARD AND SPECIAL ANALYSES

CENTRAL IRON & STEEL COMPANY...HARRISBURG, PA.

The Arundel Corporation

BALTIMORE, MD.

Constructors and Engineers
Distributors of Sand-Gravel-Commercial Slag

A COMPLETE ORGANIZATION

Our complete organization with years of experience in successfully executing large construction contracts of various kinds is prepared to undertake the construction of earth, masonry and concrete dams, drydocks, dredging of all kinds, river and harbor improvements, deepening channels, hydraulic filling and rock work, tunnels, railroad construction, sewers and waterways.

PERSONNEL:

JOSEPH V. HOGAN, President
W. BLADEN LOWNDES, Vice-President
JOHN T. DAILY, Secretary
RICHARD A. FROEHLINGER, Treasurer

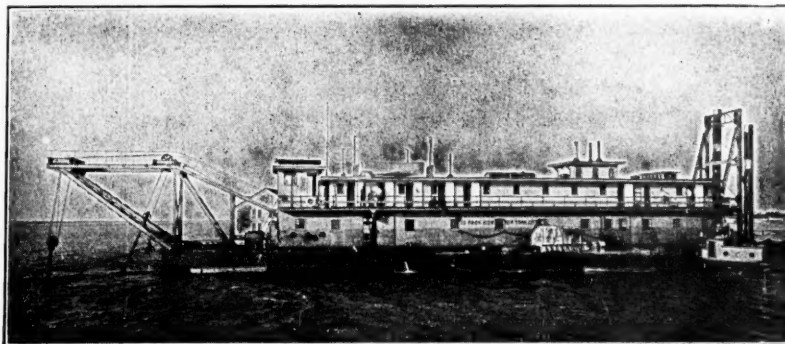
E. L. WADE, Assistant Secretary
J. N. SEIFERT, Assistant Treasurer
C. W. BLACK, Chief Engineer
HOWARD O. FIROR, General Supt.

MAIN OFFICE: Arundel Building, Pier 2, Pratt Street
BALTIMORE, MD.

Branches: NEW YORK CITY—MIAMI, FLA.—NORFOLK, VA.

DREDGING

FILLING, LAND RECLAMATION, CANALS, PORT WORKS
RIVER AND HARBOR IMPROVEMENTS—DEEP WATERWAYS AND SHIP CHANNELS



We are especially equipped to execute all kinds of dredging, reclamation and port works in Southern waters.

Correspondence invited from corporate and private interests everywhere.

Contractors to the Federal Government

ATLANTIC GULF AND PACIFIC CO.

NEW YORK: 15 Park Row

HOUSTON, TEXAS: Scanlan Building

INDUSTRIAL NEWS

(Continued from page 60)

Southern Markets.—A "Brief" on the Markets of the South and Southwest has just been completed by the MANUFACTURERS RECORD, and a limited number of copies may be obtained at \$1 each.

Practical Coal Merchandising.—Appalachian Coals, Inc., Cincinnati, Ohio, marketing agency for approximately 250 bituminous coal mines in Virginia, West Virginia, Kentucky and Tennessee, has issued Manuals Nos. 2 and 3 in a series of six on practical merchandising for ACI retailers.

Light, Mobile Drill.—Worthington Pump and Machinery Corporation, Harrison, N. J., has issued a folder briefly describing and illustrating applications of the Worthington Rock Master, a light, mobile rig adapted to down-hole drilling, line drilling, hillside drilling, breast-hole drilling, side-hole drilling and snake-hole drilling. Equipped with a quick and effective hole-spotting device, the rig can be furnished with feeds to accommodate a 3-foot, 4-foot or 6-foot maximum steel change.

Diesel Engines.—Ingersoll Rand Company, New York City, has issued a new catalog illustrating and describing its stationary-type Diesel engine. They are of the 4-cycle, single-acting, solid-injection type, built in sizes from 175 to 1500 bhp., and applicable for direct-connected alternating-current generator drive, gearing to pumps, direct connection to compressors, for belting to line shafting and similar work.

Filtration and Filters.—Under the title of "Filtration and Filters for Industrial Use" the Filtration Equipment Corporation, division of American Cyanamid Company, New York City, has issued a bulletin briefly describing and illustrating its filtering equipment, including Rotary Vacuum Filters, Rotary Vacuum Dewaterers, Leaf Filters, Bar Screens and a late development in this general field—the Laughlin Upflow Filter through Magnetite Sand.

Outline of Typewriter History.—Remington Rand, Inc., Buffalo, N. Y., is distributing in the form of booklets reference material concerning typewriter history and the manufacture of carbon papers and typewriter ribbons.

Cromasil Steel.—Specifications for Chrome-Manganese-Silicon alloy steel boiler plate have been issued in a special pamphlet by the Lukens Steel Company, Coatesville, Pa. It covers the material sold under the trade name "Lukens Cromasil Steel."

History of Consolidation Coal.—In commemoration of the 70th anniversary of the founding of the Consolidation Coal Company, there has been issued an attractive book tracing the history and development of the company's operations since 1864. The data, compiled by Charles E. Beachley, secretary, is a record not only of the expansion of the company to its present position as one of the foremost producers of bituminous coal in the world, but it parallels the development of coal mining in the United States particularly in West Virginia, Kentucky and Maryland. The Consolidation Coal Company owns 300,000 acres of coal land containing a reserve of 1,800,000,000 tons of coal, and operates 22 mines in Maryland, Pennsylvania, West Virginia and Kentucky.

Asphalt Paving Mixtures.—A revised edition of a pamphlet entitled "The Rational Design of Asphalt Paving Mixtures" has been issued by The Asphalt Institute, 801 Second Avenue, New York City. Factors controlling stability and durability of paving mixtures are discussed and application tests are described.

Forest Survey Bulletins.—Advance information on the supply of pulpwood in Georgia, covering 35 counties; rules of forest practice; and use of aerial photography in mapping ground conditions and cruising timber in the Mississippi River area are among special releases of the Southern Forest Experiment Station, New Orleans, La.

New England Almanac.—The annual edition of The Old Farmer's Almanac of New England for 1935, lives up to the traditions and features of the past. The publisher tells of its life of 143 years and its use by the Supreme Court of Massachusetts, by railroads and steamship lines, and prominent men of New England from Calvin Coolidge down. It is published by Robert P. Thomas, Boston, Mass.

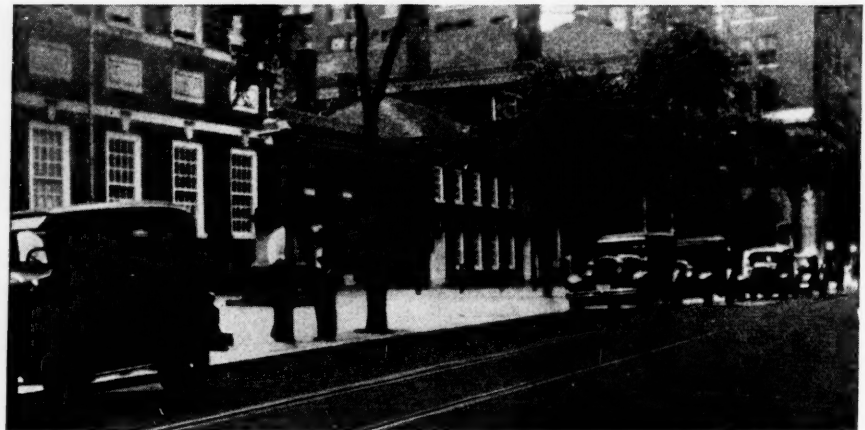
Paper Trade Directory.—The 1935 edition of Lockwood's Directory of the Paper and Allied Trades, now available for distribution, is more complete than last year. In covering paper and pulp mills, mill officials, classification of output, and consumption, the revised edition contains a list of paper dealers, paper stock dealers, woodpulp importers, pulp testing chemists, trade associations and statistical information. It is published by the Lockwood Trade Journal Co., Inc., New York City, and sells for \$7.50 a copy.

America's Most Historic Street Brick Paved

Chestnut and Walnut Streets, Philadelphia, have recently been paved with brick. Thus Independence Hall, America's most historic spot, now faces on a fine brick pavement.

It is especially fitting that the country's greatest shrine should be improved with the world's most enduring pavement.

A newspaper comment, made during the construction of the pavement, aptly summarizes much paving wisdom. It reads in part:



The New Brick Pavement, Independence Hall, Philadelphia

"That new brick paving in Chestnut Street—how well it looks and how easy it rides! Everyone seems pleased with it, and a bit proud. Pleased with its appearance, and proud of such a thorough job . . .

"That's the way the city should do everything," said an onlooker. "No big municipality should be content with half-wayness. Make-shift makes for shiftlessness." . . .

No other pavement approaches brick in long life and low maintenance. It resists both weather and traffic.

For information on brick pavements, write National Paving Brick Association, National Press Building, Washington, D. C.

PAVE AND RESURFACE WITH BRICK

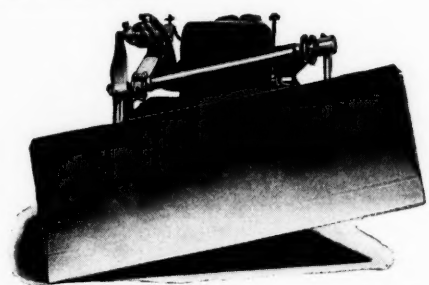
Continental Line

The line of Continental equipment, designed for hydraulic operation with crawler-type tractors, includes Bulldozers, Trailbuilders, Rippers, Pick-Up-and-Carry Wagon Scrapers and Snowplows. Write for descriptive material.

The Blade Tilts

The blade is hydraulically powered—up and down—or held in any desired position. The operator can tilt the blade as shown below. This makes it possible to grade while the dirt or other material is bulldozed. This is a most desirable feature that speeds up work and reduces equipment outlay.

Continental Bulldozers are built of dynamic steel—developed for equipment subjected to continuous shock.



Something New in Bulldozers

The Continental Bulldozer (Wooldridge Patents) offers outstanding features:

1. Blade can be tilted without the operator leaving the tractor seat.
2. Bulldozer is pushed direct from tractor drawbar.
3. Can be converted into a Continental Trailbuilder at small cost.
4. Snowplow Blade can be attached to bulldozer frame.
5. Fabricated primarily from Dynamic steel.

CONTINENTAL ROLL & STEEL FOUNDRY CO.

INDUSTRIAL EQUIPMENT DIVISION

CHICAGO

332 South Michigan Ave.

ILLINOIS

General Offices: East Chicago, Ind.

SAND—GRAVEL—BRICK FILTER GRAVEL

Washed Sand and Gravel for Concrete
Roads and Buildings

Filter Gravel, all sizes—Building Bricks

FRIEND & CO., INC. River St., Petersburg, Va.

TARPAULINS

Waterproof and Plain - - - All Sizes
Immediate Delivery - - - Manufacturer's Prices
Canvas in every weight for every use.

ATLANTA TENT & AWNING COMPANY
Box 974 ATLANTA, GA.

CRUSHED LIMESTONE

Best for All Purposes

We manufacture all sizes of stone suitable for all classes of road building and concrete work where only a high-grade limestone is required.

Quarries opened up in 1912.

Capacity 8000 tons daily.

Four Quarries

Blue Ridge, Va. Pembroke, Va. Pounding Mill, Va.
Boxley, Greensville County, Va.

W. W. BOXLEY & COMPANY

Room 711, Boxley Building, ROANOKE, VA.



Mascot Chatts

ASPHALTIC ROADWAY GRAVEL

ROOFING GRAVEL CRUSHED STONE

ASPHALT FILLER DUST

American Limestone Company

Knoxville

Tennessee

Business Men Urge Abandonment of Destructive Government Practices

CITING the fact that apprehension, uncertainty and unrest prevail in business and industry due to the application of unwise, uneconomic and oppressive artificial philosophies, principles and practices contrary to the functions of Government, the Virginia Manufacturers Association at its annual meeting adopted the following resolution:

Resolved that this Association appeals for the restoration of mutual confidence between the Government and business, commerce and industry, without which there can be no recovery and permanent progress.

First—By assurance of a stable monetary system.

Second—By assurance of no further increase in the National debt, except for food and shelter for those in distress who are willing to work.

Third—By abandonment of Federal expenditures to require non-production and destruction of farm and other products and the enforced curtailment of human effort below that necessary for established standards of living.

Fourth—By discontinuance of enormous expenditures for any and all Government competition with private enterprises whereby private rights, initiative and investment are dissipated and destroyed.

Fifth—By immediate deliverance from partisan Governmental boards, agencies and influences which promote strife and create barriers and antagonisms against heretofore peaceful and mutually agreeable and successful relations between employers and employees, principally due to the inequitable interpretation of the provisions of Section 7A, of the National Recovery Act.

Sixth—By revision of the National Recovery Act so that the proclaimed partnership between Government and industry may not be negated or destroyed by the bureaucratic dictation and control of one of the partners, and that fair and possible trade and industrial practices may be established with only such measures of Federal regulation as may be necessary to insure compliance and to prevent abuse thereof, through American judicial procedure, and

Finally—By application of the pledged principles of economy in all Federal activities and the abandonment of unnecessary Federal direction and control of vast individual private activities which experience has demonstrated to be futile and physically impossible.

A copy of the foregoing resolution unanimously adopted by the Virginia Manufacturers Association has been furnished to the President, Senators and Representatives in Congress, the Governor of Virginia and to the Press.

Retards Stable Business Recovery

A PETITION signed recently by 17 large trade associations placed them on record against the wide expansion through FERA of government manufacturing plants into new fields. As given out by the Board of Directors of the National Association of Manufacturers, the following objections were cited:

Entrance of the Government into the manufacturing business in competition with its own citizens even to supply relief for the unemployed constitutes an extravagant use of the taxpayers' money in further experimentation. It simply shifts employment from private to public enterprises and serves to retard stable business recovery. To furnish the necessities required through government operated factories is the wrong way to do the right thing. Hundreds of employers have at great cost kept men on pay rolls when there has been no work for them. Now it is proposed to penalize these firms and their employees by not giving them work which must be done.

All available evidence indicates that private industry can produce cheaper than government plants, so that there is a net loss to the taxpayers who pay relief bills.

Reemployment can be accomplished soonest by seizing every opportunity to stir the flow of private capital for investment in private enterprise.

Among the answers received by the various trade associations presenting the petition, were the following significant remarks:

"Our firm is absolutely opposed to Government entering business in any manner unless present business facilities are inadequate."

"This business should be turned over to concerns now operating manufacturing plants. The work could be done more efficiently, at a lower cost, and would at the same time probably give employment to many who are not now employed."

"It will take business away from many plants now in operation causing them to close or to go into bankruptcy."

"We are strongly opposed to FERA operation because our own experience with Government operation has taught us that we can expect nothing but inefficiency and waste; because we are opposed to Government competition with private industry; and because it will deter the re-establishment of industry's confidence in the Federal Government."

"It is most unfortunate that the Government should tolerate and even inaugurate this competition with business at a time when business is trying to cooperate to meet depression conditions."

"It would be more economical for the Government to purchase these supplies and distribute them to the needy than to attempt to make them in Government-operated plants. 'The nation cannot prosper or have full employment through subsidizing inefficient methods of production.'"

"There is too much danger of emergency programs being changed to permanent once they get started."

Texas All-State Council Urges United Action

AT a recent joint meeting of the directors of the West Texas Chamber of Commerce, East Texas Chamber of Commerce and the South Texas Chamber of Commerce, there was issued a Declaration of Principles of the Texas All-State Council. The Regional Chambers adopted the following to bring about united action.

First: We stand for a championship of private business, industry, and ownership of property as the road to recovery, to which end we shall sponsor all Federal and State measures, which tend to lend encouragement and confidence to private business and shall oppose all measures and administrative acts which have or will destroy the confidence of business and capital and retard its welfare.

Second: We call for a rapid balancing of the Federal budget; for a reduction of the Government's extraordinary expense and for a drastic curtailment of existing and proposed Government Bureaus.

Third: We shall oppose every effort of the Federal and State Governments to go into business in competition with private and semi-private business. Although granting to the Government the right of regulation of public utilities, we oppose the government destroying private investments by competing with utilities.

Fourth: With local and state governmental liens already existing against a great portion of the tangible private property of the State, with local public debts burdening property for many years to come and with greatly decreased property values and earnings, we believe that something must be done to relieve tangible property from a portion of the ad valorem tax—otherwise the private ownership of property will cease to be the cornerstone of American civilization and prosperity. We, therefore, call upon our Legislators to study the question of the burdens of the ad valorem tax as imposed by State, School, City and County Governments with the view of immediately lifting from property at least one-half of the combined ad valorem tax now levied.

POLES
TIES
POSTS
PILING
CROSS
ARMS
CROSS
TIES
LUMBER

MAKE YOUR FIRST LUMBER COST THE ONLY COST

by employing only Eppinger & Russell Co.'s preserved woods — pressure-treated with ZMA or CREOSOTE. This treatment insures permanent protection against decay, dry rot and fungus.

Consult Eppinger & Russell Co. before you place your next lumber order. Their advice will pay you big dividends in maintenance saving.

PRESSURE TREATING PLANTS
Jacksonville, Fla.—Long Island City, N. Y.

WOOD PRESERVERS SINCE 1878
EPPINGER & RUSSELL CO.
84 Eighth Ave., NEW YORK CITY



GLAMORGAN

PIPE & FOUNDRY CO.

LYNCHBURG, VA.

Manufacturers of
Cast Iron Pipe and Fittings
For Water and Gas Service

CREOSOTED TIES, PILING, POLES, POSTS, CROSS ARMS, and LUMBER

WOLMANIZED LUMBER—

Decay and Termite Proof—Can Be Painted

Docks for Ocean Vessels

American Creosote Works, Inc.
New Orleans, La.

Atlantic Creosoting Co., Inc.
Norfolk, Virginia

Plants at: New Orleans; Winnfield, La.; Louisville, Miss.;
Savannah, Ga.; Jackson, Tenn.; and Norfolk, Va.



Charleston Dry Dock Company

CHARLESTON, S. C.

BUILDERS OF
All Welded Ships

Marine and Stationary Boilers

Repairs to Steel and Wooden Vessels

1,500 and 600-ton
Marine Railways

Northern Hard Rock Maple Flooring

BLOCK

Holt Hardwood Co., Oconto, Wis.

STRIP

MEMBERS OF MAPLE FLOORING MANUFACTURERS ASSOCIATION

Red Shale Face Brick

Smooth and Rough Textures
Finest Quality—Finest Color
Fire-flashed—Wide Range of Color

Plainville Brick Company, Inc., Plainville, Ga.



MOUNT AIRY GRANITE

*For Better
Buildings and Memorials*

NORTH CAROLINA GRANITE CORP.
Mount Airy, N. C.



QUINN "HEAVY DUTY" PIPE FORMS

Hand or Wet Process
New national and state public works construction programs mean business for contractors and pipe manufacturers. Sewers and culvert pipe will be used in large quantities for some of the work. Get ready now for the demand.

Quinn Heavy Duty Pipe Forms are standard in every respect — assures pipe of highest quality. Backed by our 25 years' experience in the manufacture of concrete pipe equipment. Sizes 12" to 84"—any length. Tongue and Groove or Bell End.

WRITE FOR PRICES AND CATALOG
Also manufacturers of concrete pipe machines for making pipe by machine process.

QUINN WIRE & IRON WORKS

1605 Twelfth St., Boone, Iowa, U. S. A.

VALUABLE
BOOK FREE



THE GEORGIA MARBLE COMPANY

Producers and Manufacturers of

GEORGIA MARBLE

TATE, GEORGIA

Atlanta · Chicago · Cleveland · Dallas · New York

WILLIAMS BUCKETS

Multiple-Rope
Power-Arm
Dragline

THE WELLMAN ENGINEERING CO.
7003 CENTRAL AVE., CLEVELAND, OHIO

Write for
Bulletins

Reconstruction of Cotton Growing Industry

(Continued from page 21)

preparation of the land by deep plowing and harrowing for a well pulverized seed bed, liberal fertilization and rapid culture during the growth and fruitage of each crop. Endeavor to double and treble the average low yields of lint cotton per acre at a lower cost of production.

Third—Plant selected seed of full inch or longer staple to improve the grade and length of the fibre. Plant the same type or variety of cotton seed in each county or district so as to supply the mills with more uniform staple of better quality, longer lint and less mixed grades and fibres.

Fourth—Reform the present primitive, expensive and wasteful system of baling and taring American cotton through the speedy adoption of high density gin compression. Abolish heavy jute bagging so objectionable to every spinner and apply cotton duck or a light closely woven burlap as a complete covering of uniform weight and market the bales under the net weight contract. Continued indifference to this economic reform in baling cotton, which has been demanded by foreign and domestic mills

for thirty years, will render the American bale a totally unequal factor in meeting and overcoming competition with other cotton growing countries whose bales are meeting the demands of the spinners for more economic delivery of the staple to their mills.

Fifth—Make permanent Federal loans to the growers on cotton bales stored and insured in bonded warehouses at a low rate of interest. Dumping the annual production of cotton on the markets during the period of harvesting is uneconomic salesmanship. The purchase of large quantities of raw cotton by the buyers causes heavy sales of cotton futures hedges on the exchanges which tends to depress market values with needless daily fluctuations in the prices of the staple. Moving the crop slowly to market would tend to more stabilization of the market values which would meet the hearty approval of both spinners and growers. The slow movement of the crop to market this season due to Federal loans to farmers on stored cotton, has raised the basis prices on spot cotton materially above futures quotations on the exchanges.

Farm Process Fees

For the purpose of reimbursing Federal expenditures for farm relief there has been levied Federal process fees

against the sales of spot cotton to domestic mills and on the sales of other staple farm products.

The levy and collection of a process fee of \$21.00 per bale paid into the Federal Treasury on all cotton purchased by domestic textile mills has had the effect of increasing the price of cotton fabrics to consumers and a decrease in the manufacture of raw cotton.

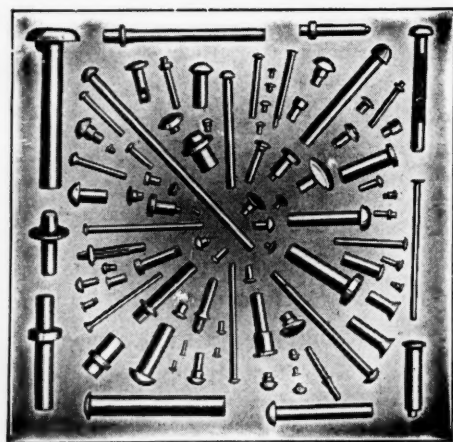
As southern farmers constitute about 70 per cent of the south's total population they will indirectly pay a large part of the cotton process fees in the purchase of cotton goods.

Process fees of 30 cents per bushel on wheat, 5 cents on corn and 2½ cents per pound on pork are direct levies collected from the farmers on the sale of those products.

While many farmers object to the payment of these direct and indirect process fees, it is generally admitted that the farm relief program for the past 18 months has been of very great value and financial benefit to the cotton growing industry.

To increase the consumption of raw cotton in American mills during this period of low purchasing power among the masses of the people, including the farmers, it would be of economic advantage to the south if the present process

(Continued on page 68)



MACHINE SCREWS

Hexagon and Square Iron and Brass Nuts.

Interchangeable Bolts and Nuts (Promco Brand) Special Screws and quality Rivets to order.

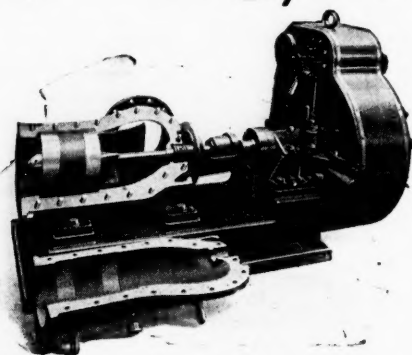
Submit samples and advise as to quantity.

Catalog for the asking.

THE PROGRESSIVE MANUFACTURING CO.
TORRINGTON, CONN.

LOW Heads • HIGH Speeds

The
DE LAVAL
PROPELLER
PUMP



DE LAVAL propeller pumps running at standard steam turbine and electric motor speeds deliver any volume against heads up to 40 ft., with efficiencies comparable to those of centrifugal pumps of the same power.

They reduce the cost of piping and save floor space. With the propeller set below low water, no priming system is required.

The steep head-capacity characteristic permits of operating two or more pumps in parallel. This makes possible a considerable saving of power, as one of the pumps can be shut down at reduced loads. The delivery of a single pump is well maintained in spite of wide variations in head pumped against.

The power limiting characteristic protects the motor against overload.

Described in Catalog B-6.

DE LAVAL STEAM TURBINE COMPANY
Trenton, New Jersey

3167



YEARS of SERVICE

The real test of any equipment is the Years of Service it has given. Cleveland Tramrail in many kinds of plants has stood these "Service Tests"—and through years of experience and development has met the demand for both standardized and special equipment to meet the rigid requirements of Industry.

Cleveland Tramrail has not been designed to sell at so much per pound, or per foot, but for the service it will render.

There is a system to meet the overhead handling requirements in all industries, from the light loads in food and textile plants to the heavy loads in metal working industries.

Consult your 'phone directory under
Cleveland Tramrail.

CLEVELAND  **TRAMRAIL**
Hand or Electric
Overhead Materials
Transportation Equipment

CLEVELAND  **TRAMRAIL**
THE CLEVELAND CRANE & ENGINEERING CO.
WICKLIFFE OHIO

AUTOMATIC STARTING! *When main power fails*

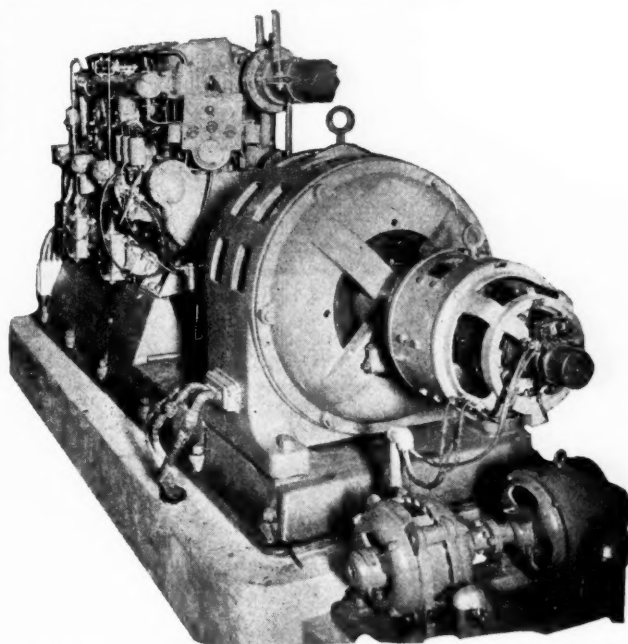
Eliminates attendants, and provides quick emergency service. A patented system of solenoids and relays automatically turns on the fuel valve, depresses spark and throttle levers, throws ignition switch to contact, operates the primer, and, when the engine starts, brings it up to speed on the governor—in from 3 to 15 seconds. Sets in operation at Wilkes-Barre, Pa.; San Rafael, Calif.; Bank of Japan, Tokio; and others in process.

Sterling
High
Duty



Internal
Combustion
Engines

12 to 565 B. H. P.
Gas or Gasoline



For power in emergency in the Bank of Japan, Tokio, a Dolphin C-6 cyl. 150 H.P. Sterling engine at 1000 R.P.M. direct connected to a 75 KW generator.

STERLING ENGINE COMPANY

Home office and plant
1270 Niagara St.
Buffalo, N. Y.

Dept. C-7

Branch office
900 Chrysler Bldg.
New York, N. Y.

Reconstruction of Cotton Growing Industry

(Continued from page 66)

fees on lint cotton were eliminated.

For the cotton year ending July 31, 1933, there was consumed in American mills 6,137,395 bales of cotton, and 8,419,399 bales exported, making a total of 14,556,794 bales of cotton, passing into the legitimate channels of consumption. After the application of the cotton process fees there were consumed in American mills for the 12 months period ending July 31, 1934, only 5,700,558 bales and exports reduced to 7,534,415 bales, a total for the year of 13,234,973 bales or a net loss in domestic consumption and exports of 1,321,821 bales.

These statistical facts showing the trend of underconsumption by domestic mills and in exports should receive the serious consideration of the Federal government, especially with relation to the rebuilding and expansion of exports of raw cotton.

Unlike food and feed products which are largely consumed in this country, a majority of American cotton must each year be exported if the south's supremacy in world cotton production is to be maintained.

What of the Future

As the Federal emergency campaign funds for farm relief under the New Deal are gradually eliminated the cotton growers will find themselves again dependant upon their own individual resources with such cooperative educational aid as will be rendered by the U. S. Department of Agriculture and other agencies interested in the farmers welfare and the cotton growing industry.

If the cotton areas of the future are restricted within reasonable limitations and the intensive system of culture is urged in connection with sound policies of diversification which will appeal to the good common sense of the growers, such reforms will prove of incalculable benefit to the future reconstruction of the cotton growing industry in the south and rapidly promote the general welfare of the growers and materially increase their individual and collective purchasing power.

There must be a prosperous and independent agriculture in this country if permanent rehabilitation is to be experienced in every department of the nation's industries.

The proper development of the marvelous agricultural and industrial resources of the south will not only make this section self-sustaining but the

most prosperous and attractive area of the entire nation.

A Great Enterprise

A series of advertisements starts with this issue of the MANUFACTURERS RECORD that will prove interesting to employer and employee, and thoughtful people generally.

There is a great enterprise on Hampton Roads, Virginia, The Newport News Shipbuilding Co., that has grown from its beginning, something over 40 years ago, to the largest shipbuilding plant in the country. Collis P. Huntington, who spanned the states with steel rails, decided that the South needed a plant of this kind and his motto was, and it is the company's today, "we shall build good ships here, at a profit if we can; at a loss if we must; but always, good ships."

Those who contemplate the creative force of industry, recognizing the benefits it confers as well as its responsibilities, see in development of this kind the real hope of the country. Upon the broadcast development of industry rests the opportunities of the present and coming generations of Americans.

It is fitting that a great enterprise—a valuable asset to the South and the nation—should speak of the place that industry occupies.



TURBINE WATER WHEELS

Manufactured by

Davis Foundry & Machine Works
Rome, Georgia, U. S. A.



Get YOUR Sample DART Bronze-to-Bronze Union

A free sample to show you how two ground bronze seats give you twice the life from every Dart Union. Write for your sample! New Catalog and Price List No. 4-30.

E. M. DART MFG. CO.

Providence, R. I.

The Fairbanks Co., Sales Agents
Canadian Factory—Dart Union Co., Ltd., Toronto



While cosmopolitan in its general appeal, and modern up to this moment in its equipment, there is a peculiar flavor of The Old South here which Southerners are quick to note and appreciate. They feel at home and come back to us again and again.

Rates \$3.00 per day and up. Every room with bath or shower.
Centrally located.

The Southern Hotel
BALTIMORE

1935

HOW ABOUT IT?

.... Going after more business in the Southern market in 1935? There is plenty to be had—we know . . . For example, business is humming at the Bona Allen Factory (the world's largest manufacturer of harness and saddlery) in Buford, Ga.

Bona Allen has steadily built sales for the past 7 years with the assistance of Groves-Keen copy and merchandising ideas. We would like the opportunity to discuss *your* problems with you.

GROVES-KEEN, INC.

ADVERTISING

Bona Allen Building, Atlanta, Georgia.

ELECTRIC Steel Castings

Weighing from 1 lb. to 500 lbs. each.

Quantity Production A Specialty
Nickel, Chrome and Other Alloy

Quick Delivery
Inquiries Solicited

CRUCIBLE STEEL CASTING COMPANY
LANSDOWNE, DELAWARE COUNTY, PA.

1905



1933

Flexible Shaft Machines

For Steel Mills—Foundries—Machine Shops—Tool and Die Shops—Woodworking Mills and General Manufacturing.

Write for Our New
Catalog No. 26

N. A. STRAND & CO.
5001-9 N. Lincoln St., Chicago, Ill.

COLD FINISHED STEELS

Rounds..Squares..Hexagons..Flats..Extra-Wide Flats..
Special Sections

SHAFTING

Turned and Polished . . . Ground

BLISS & LAUGHLIN, INC.

GENERAL OFFICE and MILL
HARVEY, ILLINOIS



EASTERN MILL and OFFICE
BUFFALO, NEW YORK

GALVANIZING

(HOT DIPPED PROCESS)

The largest job galvanizing plant in the United States

GALVANIZED PRODUCTS FURNISHED

Joseph P. Cattie & Bros., Philadelphia, Pa.

EARLE

Cut Spur, Bevel, Herringbone,
and Worm Gears

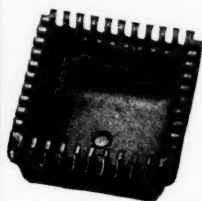
All sizes. Every description. Oper-
ating Machinery for Bridges, etc.
"Lee Simpler" Cold Metal Saws.

The Earle Gear & Machine Co.

4719 Stenton Ave.,
Philadelphia, Pa.

110 State St., Boston, Mass.
149 Broadway, New York City

GEARS



A
"GADGET"
Let Us Quote On Yours!

CASTINGS

Iron, Brass, Bronze, Aluminum.
Machine and Pattern Work.

Makers of Precise, Clean Castings.

The **RICHMOND**
FOUNDRY & MANUFACTURING CO. Inc.

RICHMOND, VIRGINIA.

"A Dependable Source of Supply"

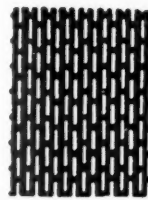
Perforated Metal Screens



For

Cotton Seed Oil
Phosphate Rock
Pulp and Paper
Chemicals Sugar

Food Products
Clay Products



All metals including Stainless Steel.

THE HARRINGTON & KING PERFORATING CO.

5631 Fillmore St., Chicago, Ill.

New York Office: 114 Liberty St.

PERFORATED METALS



We punch and perforate steel, copper,
brass, zinc, aluminum, tin and all other
metals to meet every requirement.

65 years' experience enables us to give
superior service.
Send for catalogue

Charles Mundt & Sons

490 JOHNSTON AVE., JERSEY CITY, N. J.



No. 1

**MANHATTAN
PERFORATED METAL CO., INC.**

43 17-37th Street, Long Island City, N. Y.



No. 3

PERFORATORS

of All Kinds of Metals for All Industries
Write for Copper, Brass, Tin, Zinc or
Aluminum Catalog



No. 7



No. 22

PLATING

CHROMIUM - NICKEL - SILVER - COPPER - ETC.

Manufacturers' Plating—Refinishing of Used Equipment

THE ELECTROPLATE COMPANY

MONTGOMERY, ALABAMA

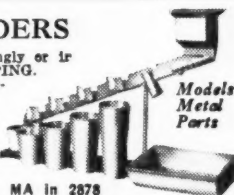
SPECIAL DEVICE BUILDERS

We Build Devices in Their Entirety, Either Singly or in
Quantity. TOOLS and DIES—METAL STAMPING.
Experimental Work—Special Manufacturing. In-
ventions Made Practical for Quantity Pro-
duction.

GERDING BROS.

Mechanical Productionists

Pearl and Vine Sts., CINCINNATI, OHIO.



LET US BE YOUR FACTORY

We have plant and equipment for
machining parts, building assemblies,
complete units and machines.

HEAT TREATING AND GRINDING

Let us furnish quotations on your products.

GENERAL MACHINE WORKS

York, Pa.

\$5,000,000 in New Southern Office Buildings

(Continued from page 23)

with linoleum, with carpets for most of the private offices. Floors of toilet rooms and elevator lobbies will be terrazzo. All toilet rooms will have tile wainscoting and enameled steel compartments. A complete heating and air conditioning system will be installed in the new building and an existing 3-story structure, which is 72 by 104 feet. There will be a direct steam system of heating with enclosed radiators. The air conditioning system is designed for winter ventilation and for conditioning and cooling the air in the summer. The fans, boilers, and coils will be placed in a sub-basement and the air delivered through a series of runnels and ducts to all conditioned spaces in the two buildings. The carrier Engineering Corporation, Philadelphia, Pa., through W. G. Guimarin & Company, Columbia, S. C., received the air conditioning contract on a base bid of \$82,350. Construction details include the following:

Excavations	10,000 cu. ft.
Concrete	5,000 cu. yds.
Reinforcing steel..	400 tons
Common brick.....	150,000
Face brick.....	175,000
Hollow tile	55,000 sq. ft.
Limestone	7,500 cu. ft.

Sub-contractors are:

Miscellaneous iron work, stairs, etc.—W. P. Mitchell, Box 673, Charlotte, N. C.

Movable steel office partitions—Art Metal Construction Co., Jamestown, N. Y.

Reinforcing steel and removable pans—Virginia Steel Co., Inc., 17th and Dock Sts., Richmond, Va.

Tile, marble and terrazzo work—Atlantic Tile & Marble Co., Inc., 201 Luckie St., N. W., Atlanta, Ga.

Electrical work—Miller Electric Co., Inc., 610 Laura St., Jacksonville, Fla.

Acoustical work—United States Gypsum Co., 300 West Adams St., Chicago, Ill.

Furnishing and applying the membrane waterproofing—The Fuller Co., 701 Gervais St., Columbia, S. C.

Plumbing, heating and ventilating work—E. R. Heyward as W. B. Guimarin & Co., 1412 Taylor St., Columbia, S. C.

Finishing hardware—Russell & Erwin Mfg. Co., New Britain, Conn.

Furnishing ready mixed concrete, excavation work—Concrete Construction & Supply Co., Columbia, S. C.

Glass and glazing—Pittsburgh Plate Glass Co., 212 East 6th St., Charlotte, N. C.

Furnishing and setting of granite work—Columbia Stone Co., Columbia, S. C.

Furnishing limestone—J. P. Falt Co., Bedford, Ind.

Furnishing and installation of lin-

leum and asphalt tile—Southern Flooring and Insulating Co., 52-72 Mangum St., Atlanta, Ga.

Painting—D. E. Carter, 1706 Two Notch Road, Columbia, S. C.

Hauling—T. S. Strickland, Columbia, S. C.

Millwork—Columbia Lumber Company, Columbia, S. C.

Louisiana, New Orleans—Whitney National Bank Building. Installation of air conditioning system and building changes. 14-story building. Cost—\$250,000.

Engineers—Leo S. Weil and Walter B. Moses, 425 S. Peters St., New Orleans, La.

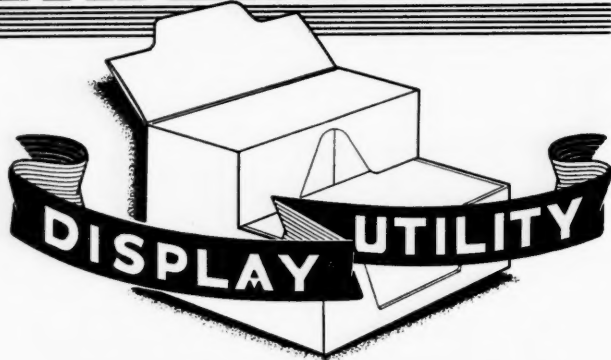
Contractor (building changes)—George J. Glover Co., Inc., New Orleans.

Contractor for air conditioning equipment—Carrier Engineering Corporation, New York City.

The Whitney National Bank building is a 14-story structure, the first floor used by the bank and the other 13 floors rented out as office space. Because all four sides of the building are exposed the design was necessarily involved, to compensate for the shifting load, due to, the sun's effect. The building encloses 3,500,000 cubic feet of space and a floor area of 275,000 square feet, requiring 700 tons of refrigeration and a total volume of 225,000 cubic feet of air per minute to be circulated. Each minute 2,500 gallons of water will be

(Continued on page 72)

OLD DOMINION PAPER BOXES



For many years Old Dominion has strived to give box users the kind of paper boxes that not only glorify their products on the shelves, but also protect them, regardless of how handled in transit. Whether your product calls for set-up or folding boxes, in large volume or small, Old Dominion can fill your requirements.

Write for samples, prices.

OLD DOMINION BOX CO., Inc.
LYNCHBURG, VA.

Winston-Salem, N. C., Burlington, N. C., Asheboro, N. C.
Charlotte, N. C.

THE OSCAR T. SMITH & SON CO.

Manufacturing

BANK AND COMMERCIAL STATIONERS

407-9-11 E. Saratoga Street
BALTIMORE, MD.

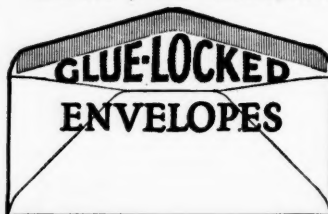
CHARACTER

QUALITY

—SERVICE—

ENVELOPES

Direct from Manufacturer to Consumer



**PLAIN and
PRINTED**
All Sizes
and Styles

OLES ENVELOPE CORP.

Montebello Ave. near 25th St., Baltimore, Md.
Sales Offices, Washington, D. C., Philadelphia, Pa., Newark, N. J.

BE FIRST WITH THE NATION'S FIRST CITY TUPELO, MISSISSIPPI

Industries seeking an ideal location for expansion will find the answer in Tupelo—the first city to sign a contract with the Tennessee Valley Authority for hydroelectric power at the nation's lowest rate.

TUPELO HAS BEEN FIRST

in many progressive movements, thus displaying its foresight and aggressiveness.

The first Subsistence Homestead unit to be completed is located in Tupelo.

The first concrete road south of the Mason-Dixon line was constructed in Lee County, Mississippi, by Tupelo business men.

President Roosevelt visited Tupelo on his FIRST official inspection of Tennessee Valley activities and referred to Tupelo as the yardstick in the government's power program.

WISE INDUSTRIALISTS WILL BE FIRST

to benefit by Tupelo's many advantages, including: Ideal living conditions; abundant supply of native, intelligent and loyal labor; many natural resources including bauxite, ceramic clays and timber.

For first-hand information write

TUPELO CHAMBER OF COMMERCE
TUPELO, MISSISSIPPI

\$5,000,000 in New Southern Office Buildings

(Continued from page 70)

pumped through washers in order to supply dehumidified air to the building. Cooling towers on the roof will have a capacity of 3,000 gallons of water a minute. The motors for the air conditioning system total 1,500 H.P.

Louisiana, New Orleans—United Fruit Company. Air conditioning 10-story office building. Cost—approximately \$40,000.

Architects—Diboll and Owens, Canal Bank Building, New Orleans, La.

Low Bidder—Carrier Engineering Corporation, Hibernia Building, New Orleans, La.

D. C., Washington—Acacia Mutual Life Insurance Company. Cost—\$1,000,000.

J. P. Yort, vice-president of the company to direct building operations, announces the architect has not yet been named. Plans will probably follow the style of the Senate Office Building on the other side of the Plaza.

D. C., Washington—Federal Reserve Board.

Office building for officers of the Federal Reserve Bank to be erected on a site purchased from the Treasury De-



Federal Court Building, Fort Worth, Texas

partment in Potomac Park at a cost of \$650,000. Architect not yet announced.

Texas, Fort Worth—Federal Courts Building now being completed at cost of \$1,000,000.

Architects—W. G. Clarkson & Co., Fort Worth, and Paul P. Cret, Philadelphia, Pa.

Contractor—James I. Barnes, Fort Worth.

The building is five stories and basement with a frontage of 216 feet and depth of 106 feet. It is of steel construction and limestone with granite base and has aluminum windows, bronze screen and interior fittings. Floors are of marble and terrazo.

TO meet demands on physical and mental strength, business men carrying unprecedented burdens must keep robust, refreshed, clear eyed, keen and alert. Good health is the nation's greatest asset.

The HIGHLAND PINES INN offers unsurpassed hospitality in a charming Southern atmosphere among congenial people; giving mental stimulation and physical refreshment outdoors from the bracing, pine-laden air and warm sunshine.

Rain or showers seldom interfere with continuous outdoor life as the sandy soil promptly absorbs all moisture and the pine trees drink in whatever may remain in the air.

Southern Pines is only 9 hours from Washington; 13 hours from New York; 20 hours from Boston and only halfway between New York and Florida on the main line of the S. A. L. Ry. with through Pullman service.

An Ideal Winter Resort

DECEMBER TO MAY

HIGHLAND PINES INN
SOUTHERN PINES, N. C.

Golf—Polo—Riding—Tennis—Racing—Hunting—
Canoeing—Motoring



PRIVATE INDUSTRY

FACTS

about the markets of the
SOUTH & SOUTHWEST

In the South are many of the largest individual plants of their kind in the United States and the world.

Nearly \$74,000,000 has been invested in new enterprises and plant expansions during the first eleven months of 1934. This indicates an increase over all of last year when the plant awards were \$76,704,000.

The value of manufactured products in the South in an acute depression year was \$7,000,000,000 and over \$4,000,000,000 was spent for materials, fuel and power.

New construction awards for the eleven months of 1934 amount to \$478,000,000 a 56% gain over the same period of 1933; the largest gain since 1931.

High prices for cotton, tobacco and other Southern crops has caused trade volume in the South to reach the highest point in several years and is stimulating business in all lines.

It is significant that the South is leading the country in the percentage of increase in purchase of motor vehicles; passenger car sales increased 50% and truck sales 69%.

With construction volume mounting, competition keener, markets expanding, there is a real opportunity to sell high grade machinery, equipment and materials.

Private industry and enterprise are ready to go forward with expansions and improvements. There is already evidence of this in increasing volume.

Must Take the Field in 1935

RECOVERY depends absolutely upon the well being and growth of private industry.

The development of this country's natural resources, the progress of science and invention and the manufacture of goods and machinery which have contributed so materially to the advancement of our civilization and which have made this country the envy of all other nations, has been due to individual initiative and private enterprise.

Advertising is an indispensable force in stimulating sound, industrial activity. It brings together buyers and sellers a thousand miles apart, quickens trade, and opens up new channels of commerce.

The Manufacturers Record reaches the bulk of the South's buying power, with an effectiveness approached by no other publication. It is regarded as the leading business publication by executives in a section which is an industrial empire in itself.

Many changes have taken place in industry the past few years and it is vitally important to keep your name and products actively before executives in charge of industrial purchasing.

The Manufacturers Record has been devoted to Southern upbuilding for more than fifty-two years and your consideration is invited to the importance of being regularly represented in its advertising columns. Any opportunity to discuss a definite proposition will be welcomed.

Advertising rates and sample copies on request

MANUFACTURERS RECORD

BALTIMORE, MD.

CLASSIFIED OPPORTUNITIES

RATES, TERMS AND CONDITIONS

Less than 100 lines 30 cents a line
100 to 299 lines 28 cents a line
300 to 499 lines 26 cents a line
500 or more lines 25 cents a line

Minimum space four lines. Count six ordinary words as one line. Cash with order on transient advertising. We reserve the right to decline any advertisement and request the assistance of our readers in excluding undesirable advertisements.

Business Opportunities

\$6,000,000 annually leaves the South for lemons transported half way around the world. A good, thin skin, juicy, commercial size lemon, adapted to Florida growing conditions, has been developed and proved—a problem that took 20 years to solve. Advise the amount you could invest and we will submit a sound proposition offering unusual opportunities.
DESOTO NURSERIES, DeSoto City, Fla.

Don't move your plant to Jacksonville. Your labor organization will object. But if you do run your own business, let us know what kind of an industrial site you could use on water and rail transportation.
Gress Manufacturing Co., Owners,
Jacksonville, Florida

FOR SALE
Small block Meadow River Lbr. Co. stock, now on six percent basis.
Address "D" c/o Mfrs. Record.

Confidential Industrial Service

Confidential service to those desiring information regarding industrial and commercial sites with trackage and ocean going shipping facilities available in Lake Charles and vicinity. References, any established business concern, Attorney or Bank in Southwest Louisiana.
G. A. Courtney, Real Estate, 302 Old Calcasieu Bank Building, Lake Charles, La.

Mineral And Timber Lands

MINERAL lands for sale—Gold, Tin, Manganese, Mica, Feldspar, Vermiculite, white clays, high grade limestone, soapstone. Investigation solicited. Piedmont Engineering Co., Box 232, Charlottesville, Va.

FARM LANDS

Mississippi, Alabama, and Louisiana farms, ranches and plantations. Improved or unimproved propositions.

TIMBER LANDS

Southern Pine and Hardwoods. Several desirable tracts, large or small propositions, also sawmill operation.

TUNG OIL LANDS

The coming moneyed-crops of the South. Have tracts ranging from 5,000 to 50,000 acres along the Gulf Coast region in the most favored proven section.

FELKER REALTY CO.,

Realtors, Meridian, Miss.
Threefoot Bldg.

Timber

FOR SALE IN FLORIDA
210,000,000 feet long leaf pine
Address
P. O. Box 252, Bradenton, Fla.

Patent Attorneys

FREE "PATENT PARTICULARS"
Sterling Buck, over 26 years Registered Patent Attorney. Prompt and thorough services. Suite M 629 F, Washington, D. C.

PAUL B. EATON, Patent Attorney
1408-R Johnston Bldg., Charlotte, N. C.
517 Munsey Building, Washington, D. C.
417 Wachovia Bldg., Winston-Salem, N. C.

Clocks

CLOCKS FOR ALL PURPOSES
Time Recording Devices and Supplies
Buy Our Rebuilt
Time Recorders and Watchman's Clocks.
They are Fully Guaranteed.
L. E. Kaiser and Sons, Inc.
221 N. Liberty St., Baltimore, Md.
24 Hour Service on Repairs

Machinery and Supplies

450 H.P. oil engine unit, steam turbo units 500 to 1500 H.P. Complete 8 ft. band saw mill, all accessories. Piedmont Engineering Co., Box 232, Charlottesville, Va.

Inventions for Sale

MANUFACTURERS—Write for our FREE Classification Sheet of Inventions for Sale, covering 135 main subjects, and in one or more of which you will doubtless be interested. ADAM FISHER CO., 578 Earlight, St. Louis, Mo.

Men Wanted

SALARIED POSITIONS

\$2,500 to \$25,000
This thoroughly organized advertising service of 25 years recognized standing and reputation carries on preliminary negotiations for positions of the caliber indicated, through a procedure individualized to each client's personal requirements. Several weeks are required to negotiate and each individual must finance the moderate cost of his own campaign. Retaining fee protected by a refund provision as stipulated in our agreement. Identity is covered and, if employed, present position protected. If you have actually earned over \$2,500, send only name and address for details.

R. W. BIXBY, INC.,
103 Delward Bldg., Buffalo, N. Y.

United Laboratories, Euclid Ave. at Ivanhoe, Cleveland, Ohio, has a few open territories for salesmen with Industrial Sales or Engineering experience. Regional offices and warehouses at convenient locations.

A salesman with experience in engineering or industrial sales. Maintenance products. Commission and bonus. Give age, experience, address, phone number. Write No. 9294, c/o Mfrs. Record.

Sales agencies or representatives wanted to handle our line of road building and quarry equipment in the southern states. Address Acme, Frankfort, N. Y.

SALES REPRESENTATIVE to handle lines of a large distributor of finished steels throughout Atlantic seaboard states south of and including Virginia. Preferably some one already travelling this territory, with established contacts in kindred lines. Address No. 9297 care of Mfrs. Record.

EXECUTIVE POSITIONS. Men capable of filling salaried positions, along sales, executive, engineering, or similar lines are offered our service for locating desirable positions. Our facilities cover every branch of industry and are nation-wide in extent. If you are capable of filling a position in the above classes, it will be greatly to your advantage to investigate this service. Details upon request.

EXECUTIVE PLACEMENT ASSOCIATES
Lafayette Building Buffalo, New York.

Positions Wanted

Sales Engineer for Latin America available. Age 34. C. E. graduate. Fluent Spanish. 12 years' experience building and highway products, sales and construction.
Address No. 9289, c/o Mfrs. Record.

POSITION WANTED AS MASTER MECHANIC or in charge of department or operation where mechanical ability would be of value. Have acted as Master Mechanic, General Machine Shop Foreman and Superintendent of manufacturing plant. Best of references as to habits and ability. Thoroughly dependable. Address No. 9290 c/o Mfrs. Record.

Real Estate

Eastern Shore, Md., water front homes, estates and farms. No better section for investment at this time. H. Wrightson Dawson, St. Michaels, Md.

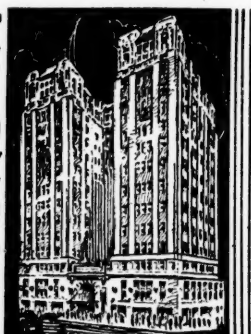
Agencies Wanted

Distributor of mechanical lines, rated AA-1, having established sales force and contacts in Maryland and the District of Columbia, will entertain distribution of additional substantial and marketable lines. Address No. 9290 c/o Mfrs. Record.

CLASSIFIED OPPORTUNITIES DEPARTMENT

Good advertising
at moderate
rates

in RICHMOND-VA



HOTEL

JOHN MARSHALL

"Richmond's Host for Every Occasion"

HOTEL RICHMOND

"Overlooking Historic Capitol Square"

HOTEL WM BYRD

"Opposite Broad Street Station"

Hospitality—Convenience—Restfulness

Splendid Service ♦ Garage Accommodations

CP Super Safety Balancer

Recently developed by engineers of Chicago Pneumatic Tool Company, New York City, the CP Super Safety Balancer is a simple, sturdily built counterpoise which is declared to have no "equal for suspending, balancing and lifting portable tools or objects weighing up to 200 pounds." A combination of tapered drum, single cable and a new method of applying the spring force gives the device an extremely long balanced travel, while two high grade ball bearings at each end of the shaft provide maximum support for the spring mounted between them. A feature of

the balancer is the single cable which allows for inspection at all time and removal of the cable without disassembling or altering spring adjustment. A cable guide keeps the cable in line with the drum groove, preventing jumping.

Junior Dunbrick Machine

The W. E. Dunn Manufacturing Company, of Holland, Mich., who have specialized for 30 years in the manufacture and installation of standardized plants for low cost production of building units, recently announced a new

JUNIOR size line production machine for making DUNBRICK. This is a low cost, permanent building unit of fire-proof construction which may be made from local materials, and is of the United States standard size brick, but lighter in weight. The new machine is of heavy steel frame electrically welded, producing brick in a series of all-steel mold boxes in the form of a continuous chain, which passes under an open bottom feed hopper and then under a graduated packer head with a controlled feed to obtain any desired compression. The machine is equipped with an automatic pallet feeder and has a capacity of 1500 brick per hour.

Interesting Stimulating Authoritative

Business trends, current industrial developments and major problems affecting business life are comprehensively discussed in each monthly issue of the Manufacturers Record—the accepted authority on business and industry in the South.

MANUFACTURERS RECORD, Baltimore, Md.

The South's Business Paper

Waterworks Plant FOR SALE

Complete Water Works Plant, for Large Industrial Plant or Small City:—3,000 gallon steel tank with 75 foot Tower, 2—Fairbanks Morse Duplex Pumps 6"x10" designed for taking water from deep wells and forcing same into 100 ft. Tank. Each Pump is direct connected with 20 H. P. General Electric Motor complete with Switch Boards and Starters. We have Pipe, Valves, Fittings and Hydrants for Complete Water Plant.

BURTON MACHINE CO.
NORFOLK, VA.

LIQUIDATION SALE

of GRIGSBY-GRUNOW CO., Inc.

MAKERS of *Majestic* RADIOS, TUBES, REFRIGERATORS

By Order of the United States District Court

PURSUANT to an order of the United States District Court all of the machinery, equipment and inventory of Grigsby-Grunow Company is now being sold by the Trustee. An immediate inspection of the property is urged as sales are being made daily to many of the large concerns throughout the country.

The good will, patents, trade marks, trade names and the real estate are also being offered for sale.

The machinery consists of the very finest makes of all types of metal and wood working machinery, also a completely equipped tube, enameling and plating plant, all of which are in immediate operating condition.

The inventory consists of made-up parts, parts in process and raw materials for radios, refrigerators and radio tubes. The Service Department on all three items has been kept intact.

The GOOD WILL consists of the name "MAJESTIC" as applied to radios, refrigerators and tubes, which name has been extensively advertised throughout the world, and which is secured by copyrights in practically every country in the world including many other trade names, patents and copyrights.

The real estate consists of factory buildings having a floor area of approximately 950,000 square feet and are suitable for any type of manufacturing.

The Trustee will receive offers for any part or

parcels of the assets. All machinery and materials of production are reasonably priced. Competent salesmen will be glad to assist buyers at the plant, 5801 Dickens Avenue, Chicago, Ill.

REFRIGERATION SERVICE DEPARTMENT

The Trustee, under order of the Court, has set up a Refrigeration Service Department, to maintain service and to sell service parts. This will maintain the name and prestige of "Majestic" and be an asset of major importance to anyone buying the "good will" of the company.

SERVICE PARTS FOR RADIO

There is on hand a considerable quantity of service parts for radios which are staple merchandise and are being sold to the users of the millions of Majestic radios now in service.

SEND FOR THIS CATALOG

Lists all of the assets. Free to prospective buyers. Mail request to Frank M. McKey, Trustee in Bankruptcy, Grigsby-Grunow Co., Inc., 5801 Dickens Ave., Chicago, Ill.



RESALE DEPARTMENT

MACHINERY EQUIPMENT SUPPLIES

Sale of Valuable Electrical Machinery

Pursuant to the terms of the bills of lading and tariff governing, the undersigned will, on the 12th day of December, 1934, at 11:00 o'clock, A.M., at Monroe, North Carolina, sell at public auction to the highest bidder the following unclaimed property:

One Electric Transformer, weighing about 5000 pounds, shipped by the Union Electric Light & Power Company of St. Louis, Mo., April 11, 1929, consigned to Order Notify Jackson Gold Mining Company, Waxhaw, N. C.

One Air Compressor in approximately 32 parts, shipped April 18, 1929, and

4 Electric Motors and Equipment, shipped April 25, 1929, both from A. G. Schoonmaker & Son, of 30 Church St., New York, billed from West Side Avenue, N. J., consigned to Order Notify Jackson Gold Mining Co., Waxhaw, N. C., said shipments having been moved from Waxhaw to Monroe, N. C., for storage, and are now in the warehouse of Davis-Williams Co., adjoining the tracks of the Seaboard Air Line Railway at Monroe, where the sale will take place and where the said machinery may be examined.

Terms: CASH

Legh R. Powell, Jr. and
Henry W. Anderson, Receivers of
SEABOARD AIR LINE RAILWAY
COMPANY,
By: J. L. Walker, Freight Claim Agent

ARC WELDER BARGAIN LIST

The new 40 Volt type—Electric Drive, Gasoline Engine and "Build Your Own" Generators—all at tremendous savings.

RENT—NEW—USED

Write for catalog

Hobart Bros. Co.,
Box MR-124, Troy, Ohio
Rental Division

Gregory Hi-Grade Rebuilt Electric Motor Bargains

A. C. MOTORS

3-Phase—60-Cycle

HP	Make	Type	Speed
250	Westinghouse	CX	580
150	General	form K	600
75	General	KT	1200
50	Crocker Wh.	Q	570
25	Allis Chalmers	AN	1150

SLIP RING MOTORS

3-Phase—60-Cycle

HP	Make	Type	Speed
125	Allis Chalmers	ANY	850
75	Gen. Elec.	MT	900
50	Wagner	BR	850
40	Westinghouse	HF	1140

SYNCHRONOUS MOTORS

3-Phase—60-Cycle

HP	Make	Type	Speed
350	Ideal	SMS	1200
240	General	ATI	514

GASOLINE ENGINE DRIVEN ARC WELDER
200 Amp. Gen. Elec., compound intp. arc welding gen., with four cylinder engine, control panels, stabilizing coil, resistance, cable and electrode holder.

STEAM TURBINE SET

150 KW. Gen. Elec. Curtis, D. C.

OIL ENGINE SET

75 KVA G. E. Bush Sulzer

Send for Special List N-35

GREGORY ELECTRIC CO.

1600 So. Lincoln St., Chicago

WANTED PIPE AND STRUCTURAL STEEL

Ostend and Scott Sts. **MARYLAND PIPE & STEEL CORPORATION** Baltimore, Maryland

NEW-USED-UNTESTED

PIPE
ALBERT & DAVIDSON PIPE CORP.
100 Ave. 50th St. New York

NEW AND USED

PIPE

NEW THREADS AND COUPLINGS
GREENPOINT IRON & PIPE CO. Inc.

187-207 Maspeth Ave., Brooklyn, N. Y.

RR

NEW-USED
RECLAIMED
FROM 1876/77
Cut to Sketch and Stocked

ALBERT PIPE SUPPLY CO. Inc.
Berry and North 13th St. Brooklyn, New York

PIPE

Reconditioned pipe, new threads and couplings, all sizes. 3/4 in. to 36 in., guaranteed suitable for all practical purposes.

MARINE METAL & SUPPLY CO.
167 South Street, New York City

IRON AND STEEL PIPE

Large quantity new and used Government material in excellent condition, ready for immediate shipment. Low prices.

CENTRAL PIPE & SUPPLY CO.
Box 1099 Charleston, W. Va.

MACHINERY

Hoists — Boilers — Electric Motors — Machine Shop Equipment — Structural Steel — We dismantle industrial plants of all kinds. Let us have your inquiries.

W. M. SMITH & COMPANY
Birmingham Alabama

SERVICE SUPPLY SPECIALS SALE OR RENT

- 1—Browning "F" 1 1/4 Yd. Gas Crane—72' Boom.
- 1—Byers 1/2 yd. full revolv. gas Crane—40' Boom.
- 1—27E Rex Paver, 6 cyl. late model, 25' Boom.
- 2—10-ft. and 1—18-ft. Double Sced Finishers.
- 2—50 and 1—100 Ton —2 & 3 comp. Weigh-Batcher Bins.
- 1—Byers Bearcat Crane with Back Hoe & Skimmer.
- 4—10-Ton, 3-wheel, 4 and 6 cyl. Rollers.
- 2—5-ton, 3-wheel, 4-cyl. Rollers.
- 1—Rex triplex Road Pump, 80 G.P.M.
- 4—Warco and Gallion Motor Graders, McC.-Deering power rubber tires or crawler tracks.
- 4—Model 35 Tractors and Bulldozers.
- 2—Berg Highway Surfacers.
- 1—3/4 yd. Bay City Tractor Shovel & Trench Hoe.
- 10—7—10—14—21—28S Mixers with batchmeters.
- 8—12, 3/4, 1, 1 1/4 Yd. Owen Clam Shell Buckets.
- 9—110, 220, 330 ft. Portable Compressors.
- 5—No. 3, 5, 6, 7, 9B2 McK.-Terry Pile Hammers.
- 7—2, 3, 4, 6 in. Self-Priming Centrif. Pumps.

"Write for our latest Bargain List"

SERVICE SUPPLY CORP.
20th and Venango Sts. Philadelphia, Pa.

**SAVE MONEY
BUY MORECO
Rebuilt MOTORS**

A large eastern electric power company writes: "The 100 kw. v. motor generator set was purchased for 25% of new equipment cost and is in every way satisfactory for the job intended." Don't buy ordinary "used" equipment of questionable condition in performance. More than 5,000 motors, generators, transformers, etc., in stock, ready for quick shipment. Write, wire or phone your electrical equipment requirements.

Money-Back Guarantee

5000 Machines in Stock
The MOTOR REPAIR & MFG. CO.
1557 Hamilton Ave., Cleveland, O.

CENTRIFUGAL PUMPS

2—550 G.P.M. at 70' head.
Dayton-Dowd, Motor Driven, with 15 H.P. Allis Chalmers A.C. Motors.

**MACHINE TOOLS
ELECTRIC MOTORS &
GENERATORS
AIR COMPRESSORS
PUMPS.**

DELTA EQUIPMENT COMPANY

148 N. 3d Street, Phila., Pa.

—TRANSFORMERS— SALES AND REPAIR SERVICE

6—150 KVA Moloney Transformers, \$375.00
1 phase, 60 cycle, 4400/2200—440/220 EACH
volts.

We carry a complete stock.

Write for Catalog No. 129-B

All transformers guaranteed for one year.

THE ELECTRIC SERVICE COMPANY, Inc.

"America's Used Transformer Clearing House"
Station M. Cincinnati, Ohio



GOOD USED EQUIPMENT

We are offering the best in Good used Equipment for Industrial plants of all kinds, from the Old Hickory Powder Plant as well as other plants purchased by us recently. Let us quote. Our prices are always money saving.

Just a few of our many offerings:

BOILERS

1-300 H.P. Helne; 3-250 H.P. B. & W.; 4-600 H.P. Edgemoor; 1-250 H.P. Marine; 9-150 H.P. H. R. T.; 1-200 H.P. H. R. T.

ENGINES

1-1500 Cross Compound Corliss; 2-350 H.P. Nordberg; 1-300 H.P. Lane Corliss; 1-12x10 American Ball duplex; 1-80 H.P. Ames Automatic; all sizes vertical engines, 5 to 60 H.P.

CENTRIFUGAL PUMPS

5-16" turbine driven; 2-14" turbine driven; 3-14" motor driven; 4-8" turbine driven; 1-10" Goulds; 2-8" Goulds; 1-6" Goulds; 2-5" Goulds; 1-4" Goulds, all motor driven; all sizes belted centrifugals from 4" to 10" in various types, including several dredge and sand pumps.

STEAM PUMPS

50-Steam pumps, single and duplex; tank pumps, boiler feed and general service pumps, in all sizes; all standard makes and in perfect condition.

MOTORS

100-Electric Motors, slip ring and squirrel cage; 220, 440 and 550 volts; sizes range from 7½ H.P. to 300 H.P. With or without starters; all standard makes and perfect condition.

TANKS

200-Steel Tanks, various sizes, for pressure and storage; all in good condition. Send for list.

CHEMICAL EQUIPMENT

Still, columns, autoclaves, centrifugal wringers; nitrating units; benzol recovery equipment; ammonia recovery equipment; towers, acid eggs; acid pumps and miscellaneous equipment of all kinds. Send us your inquiries.

PAINT AND PIGMENT PLANT

1-Steam Jacketed, ribbon conveyor Mixer; 1-Day 20" Paint Mill; 1-Kaestner 42" Buhr Mill; 1-Aero Pulverizer; 1-Hardinge 8' x 30" Pebble Mill; 1-Raymond 4 roll high side Mill; 4-Agitators and Mixing Pots.

PULP AND PAPER MILLS

We have just purchased equipment for a pulp plant, including digester and diffuser building, with capacity of 100 tons pulp per day. Detail information on request.

Complete 50 ton pulp mill with wood room, caustic recovery, digester, tanks, power plant, etc. Also beater, Jordans, stuff pumps, 72" wet machine, 60" Fourdrinier, calendars, winders, etc.

BRIQUETTING PLANT

Complete 40 ton per hour capacity Briquetting Plant with Komareck Presses, Rutledge fluxer and mixing equipment. Practically new.

GENERAL EQUIPMENT

Complete line of General Equipment, Boilers, Engines, Generators, Pumps, Heaters, Tanks, Blowers, Fans, Machine Tools, etc. Write for details.

NASHVILLE INDUSTRIAL CORPORATION
OLD HICKORY, TENNESSEE

RELIABLE REBUILT EQUIPMENT

POWER PLANT EQUIPMENT

BOILERS, WATER TUBE-500 H.P., 400 H.P., 300 H.P., ASME.
BOILERS-Self Contained 2-100 H.P. Locomotive, 2-150 H.P. Erie Economic ASME 125 lbs.
FEED WATER HEATERS-Cochrane 1200 H.P., 1000 H.P., 500 H.P., 300 H.P.
STORAGE HEATERS-5000 gal., 500 gal., 400 gal., 350 gal.
STEAM PUMPS-(2)-18"x12"x16" Union Simplex, 12x8x12, 12x7x10, 10x6x10, 9x5¼x10, 7½x4½x10, Duplex.
ELECTRIC MOTORS-AC and DC up to 1500 H.P.
WELDERS, 2-24 KVA motor driven spot.
WELDER, 1000 amp., 200 amp., motor driven arc.

METAL WORKING MACHINERY

BORING MILLS-58" & 72" Bullard vert., 2 heads.
PIPE MACHINES, 2"-4"-6"-8" various makes, belt or motor driven.
DRILL, No. 20 Minster hy. duty, cap. 2½" in steel.
GRINDER, 10"x52" Landis plain, self contained.
HAMMERS, 1100 lb. single fr. 2000 lb. dbl. fr., stm.
MILLER, No. 3 Becker univ., table 54"x12", cone dr.
FLANGER, ½" cap. McCabe, screw clamps.
LATHE-30" x 30" Harrington, belt dr.
LATHE-26"-48" x 12" McCabe 2 in 1, belt drive.
LATHE, 20" x 8' Hendy, belt dr., taper attachment.
PLANNER, 30" x 30" x 14" Cincinnati, 2 heads belted motor dr.

THE O'BRIEN MACHINERY CO.

113 N. THIRD ST.

PHILADELPHIA, PA.

MEMBER NATIONAL ASSOCIATION USED MACHINERY AND EQUIPMENT DEALERS.

20-10- and 5-ton electric Cranes.
15-ton 80' all steel boom Derrick.
10-ton Jib and 5-ton overhead Crane.
37½ K.W. and 40 K.W. Generators.
12 x 10 and 10 x 10 Air Compressors.
Lambert Hoist. Engine, Mead Electric Hoist.
Ryerson High Speed Friction Cold Saw.
Lucas Column Facer, Riveting Machines.
Multiple and Single Punch Presses.
Pneumatic Hammers, Electric Reamers.
D.C. and A.C. Motors, Starters, Switches.
W. N. KRATZER COMPANY, PITTSBURGH, PA.

RAILS NEW & RELAYING ALL WEIGHTS

Let us know your needs. We may have material in stock near you.

WE BUY RAILS FIT TO RE-LAY

ROBINSON & ORR

Columbia Bldg., 248 Fourth Ave., Pittsburgh, Pa.
New Frogs and Switches at low prices.

BARGAIN FOR QUICK SALE

2-150 HP Scotch Marine boilers A.S.M.E. specifications.
2-1½ yd. Mead Morrison Clam Shell Buckets.
1-350 HP Cookson Openfeed Water Heater.

JOHN BRENNAN & CO.

5859 Ogden Avenue Chicago, Illinois

HANDLE LATHE WANTED

No. 1 Ober Handle Lathe, new model, complete with patterns. Address

No. 9298 c/o Mfrs. Record
Baltimore, Md.

FOR QUICK SALE

6-150 HP 72 x 18 Boilers, Ohio Standard 150 lbs.\$600.00 each.
1-New 450 HP Allis-Chalmers Corliss Engine, B.D.\$2000.00
1-7 x 7 x 6 Ingersoll-Rand type FRI Steam Air Compressor.\$300.00
Many other bargains. Send us your inquiries.

Cincinnati Machinery & Supply Co.
25 W. Second St. Cincinnati, Ohio

SURPLUS EQUIPMENT FOR SALE FROM MILLION DOLLAR JAMES RIVER BRIDGE, RICHMOND, VA.

BEAMS	CRANES	PAVERS
BUCKETS	GANTRIES	SHOVELS
BATCHERS	HAMMERS	SWINGERS
BOILERS	HOISTS	TRACTORS
COMPRESSORS	MIXERS	TRAVELERS
DERRICKS	PUMPS	CHANNELS

MILLION FEET STRUCTURAL TIMBERS

PHILLIPS MACHINERY COMPANY

RICHMOND

VIRGINIA

E. C. A. Rebuilt Equipment

FOR SALE OR RENT

Air Compressors	Derricks
Bins & Batches	Hoists
Boilers	Locomotives
Buckets	Mixers
Cranes	Pavers
Conveyors	Pumps
Crushers	Rollers
Draglines	Track
Graders	Tractors

Send for complete stock list.

Equipment Corp. of America

CHICAGO
1166 S. Washtenaw Ave. Phone Nevada 2400
PHILADELPHIA
P.O. Box 5419 Kingsessing
Sta. Phone Granite 7600
PITTSBURGH
P.O. Box 933
Phone Federal 2000.

FOR SALE

CARS

36-12 yd. Western Air or Hand Dump Cars
12-41 ft. 50 ton Steel Flat Cars
16-40 ft. 50 ton Steel Gondolas
60-36 ft. 40 ton Wood Gondolas
80-50 ton Steel Hopper Coal Cars

EQUIPMENT

Locomotives, Cranes, Steel Sheet Piling, Refrigerator Cars, Tank Cars.

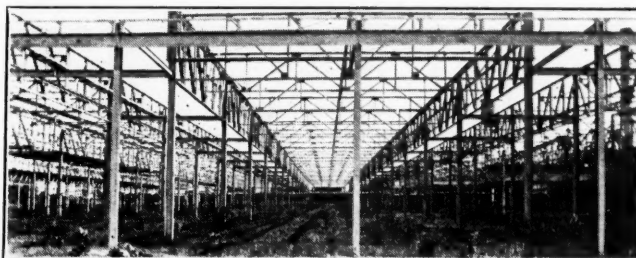
RAILS

New and Relay Rail, all weights, C/L or tonnage Lots.

HYMAN-MICHAELS CO.

20 N. Wacker Dr. Bldg.
Chicago

Railway Ex. Bldg. 101 West 31st St.
St. Louis, Mo. New York.



1700 tons of new steel buildings for sale at
Memphis, Tenn. and Birmingham, Ala.
Write us your requirements.

W. M. SMITH & COMPANY
Birmingham, Alabama

INDEX FOR BUYERS

Numbers Indicate Pages Where Products Can Be Found

Architects	79, 84	Machinists	69
Attorneys (Patent)	79	Marble	65
Belts (Chain)	3, 13	Oil (Lubricating)	11
Boilers	9, 65	Perforated Metal	69
Boxes (Paper)	70	Piling, Poles, etc. (Creosoted)	51, 65
Brick	62, 65	Pipe (Cast Iron)	43, 65, 81
Brick Machinery	51	Pipe (Clay)	56, 59
Bridges	39, 41, 57, 59, 60	Pipe (Steel and Iron)	76
Buckets (Orange Peel, Clam Shell)	65	Pipe Machinery (Concrete)	65
Canning Machinery	80	Plating (Nickel, Silver, etc.)	69
Castings	69	Professional Directory	79
Chemists	79	Pumps	8, 56, 57, 66
Chutes (Mail)	54	Railroads	55
Classified Opportunities	74	Resurfacer (Floor & Roof)	4
Clocks	74	Road and Street Machinery	45, 63
Contractors	61, 79	Road and Street Material	61, 62, 63
Conveyors	3, 13	Roofing	35, 54, 59
Cranes	47	Rope (Wire)	2
Crushing Machinery	12	Sand and Gravel	61, 63
Draglines	47	Sawmills	51
Dredging Contractors	61	Screens	69
Drills (Diamond and Shot)	29	Screws and Nuts	66
Electric Light and Power	49	Shafting	69
Electric Machinery	10, 76	Sheets (Steel, Galv., etc.)	6, 60
Engineers	79, 84	Shipbuilding	14, 65
Engines (Diesel, Gas and Gasoline)	67	Shovels (Power)	45, 47
Fence (Wire)	52, 57	Sites (Mfg.)	71
Filters (Water)	56	Stationers	70
Financial	48, 49, 51	Steel Bars, Alloys, etc.	59, 69
Flexible Shaft	69	Steel Plate Work	9, 39, 41, 56
Floor Resurfacer	4	Stone (Crushed)	63
Flooring (Maple)	65	Structural Steel	9, 39, 41, 57, 59, 60
Flooring (Steel)	59, 60	Tanks and Towers	53, 56, 57
Florida Section	24-33	Tarpaulins	63
Galvanizing	69	Telephone Service	37
Gas	49, 51	Tractors	79, 82, 83
Gears	69	Trailers	7, 79
Granite	65	Tramrail (Overhead)	67
Hotels	68, 72, 74	Trucks (Motor)	7
Insurance	50	Turbines (Steam)	66
Lumber (Creosoted)	51, 65	Turbines (Water Wheels)	68
Machinery (New & 2nd Hand)	75, 76, 77	Unions (Pipe)	68

Income Tax Deduction for Improvements

Senator Walter F. George of Georgia, is urging new Federal income tax legislation which will provide that expenditures for permanent improvements be deducted from income taxes.

"Everything that can be done to restore normal markets for durable goods is essentially constructive," writes Senator George.

"If expenditures for permanent improvements and betterments be allowed as deductions from all incomes for the taxable years 1935 and 1936, the markets for heavy materials and durable goods would be immediately strengthened. A corporation would save 13 per cent upon such expenditures. The effect on the Treasury would, of course, be pronounced, but the effect on business would be most pronounced. In the long run business, normal employment for our people will save the Treasury—the credit of the Government.

"The Government in the long run will not be able to sustain business and to provide food, shelter and clothing for ten million of unemployed Americans.

"In this country normally, fifteen million persons are employed in the mining, manufacturing and machine industries. About ten million of these are engaged in the production of durable goods; about five million in the production of consumption goods, so-called.

"The durable goods producers were the first to feel the effects of the depression; with them the depression has been most severe. It is estimated that about five million workers normally employed in the durable goods industries are unemployed. Obviously, if these could be put back to work, unemployment in the United States would be reduced to a minimum, because it is fairly accurate to say that a like number of unemployed normally engaged in the consumption and service industries would likewise be returned to work."

Acquires Firth-Smith Cleaner

Arrangements have been made by Parks-Cramer Company, of Fitchburg, Mass., and Charlotte, N. C., to acquire the Bunchless Automatic Cleaner and the Dustless Card Stripping and Cleaning business heretofore carried on by the Firth-Smith Company, of Boston, according to announcement by R. S. Parks, chairman of Parks-Cramer Company. W. J. Smith, president, and W. B. Walker, Southern representative of Firth-Smith Company, have joined Parks-Cramer Company—Mr. Smith as vice president and Mr. Walker as Sales Manager, Cleaner Department.

STANDARDIZED CUTTING AND WELDING TIPS

Interchangeable with various types of torches; also apparatus, accessories and complete outfits. Priced right. High quality and workmanship. Write for catalog.

THE ALEXANDER MILBURN COMPANY
1400 W. Baltimore St., Baltimore, Maryland.

• DIRECTORY

ARCHITECTS
CHEMISTS
ACCOUNTANTS

ENGINEERS
GEOLOGISTS

CHEMICAL ENGINEERS
CONTRACTORS
PATENT ATTORNEYS

Whitman, Requardt & Smith
Engineers
Water Supply, Sewerage and Structural
Engineering, Reports, Designs,
Valuations.
Biddle and Charles Sts.,
BALTIMORE, MD.

Wiedeman and Singleton, Inc.
(Successors to Paul H. Norcross)
Consulting Engineers
WATER WORKS, SEWERS, SEWAGE
DISPOSAL, APPRAISALS, VALUA-
TIONS, REPORTS
Candler Bldg. ATLANTA, GA.

Lindley Nurseries, Inc.
Complete Landscape
Planning and Planting Service
Correspondence Invited
Pomona, Greensboro, N. C.

McCallum Inspection Company
Inspection Engineers
Specialists in Wood Preservation
111 West Berkley Avenue,
NORFOLK, VIRGINIA

Gannett, Eastman & Fleming, Inc.
Engineers
DAMS
And Other Water Works Design and
Construction
Sewerage and Sewage Disposal
Appraisals and Reports
Harrisburg, Pa. New York, N. Y.

ROBERT AND COMPANY, INC.

MUNICIPAL ENGINEERING

Water Supply — Sewage Disposal — Street Improvements

ATLANTA, GEORGIA

Bylesby Engineering & Management Corporation
Wholly-owned Subsidiary of
Standard Gas and Electric Company
231 South LaSalle Street, Chicago
NEW YORK PITTSBURGH SAN FRANCISCO

WILEY & WILSON
Consulting Engineers
STEAM AND ELECTRIC POWER PLANTS
CENTRAL PLANT HEATING SYSTEMS
Heating and Ventilating Equipments for Public and Private Buildings
WATER SUPPLY, SEWERAGE AND SEWAGE DISPOSAL
MAIN OFFICE: LYNCHBURG, VA. BRANCH OFFICE: RICHMOND, VA.

HARDAWAY CONTRACTING COMPANY

Engineers Contractors

Water Power Developments, Bridges
COLUMBUS, GEORGIA

Patent Attorney (Reg. No. 7789)
Registered in U. S. Patent Off. 26 yrs.
Patent Office practice exclusively.
Special services at moderate fees, ex-
plained to Executives and Engineers on
request.
Sterling P. Buck (Special)
629 F St., N. W., WASHINGTON, D. C.

Batson-Cook Company
Incorporated
General Contractors
WEST POINT, GA.

Algernon Blair
Contractor
MONTGOMERY, ALA.

Fiske-Carter Construction Co.
General Contractors
GREENVILLE, S. C.
SPARTANBURG, S. C.

Walker Electrical Company
Electrical Contractors
General Offices: ATLANTA, GA.
Sales Offices:
ATLANTA, GA. COLUMBUS, GA.
GREENSBORO, N. C.

SPRAGUE and HENWOOD, INC.

CONTRACTORS FOR

Diamond Core Drilling and Wash Borings
For Buildings, Bridges, Dams and all kinds of Minerals
"ANYWHERE"

also
Manufacturers of Diamond Drills and Shot Drills
MAIN OFFICE SCRANTON, PA., U. S. A.

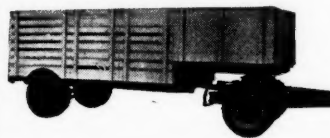


WE LOOK INTO THE EARTH
By use of Diamond Core Drills

We test foundations for buildings, bridges and
dams. We prospect coal and mineral lands in any
part of North and South America.

PENNSYLVANIA DRILLING CO.
1201-1215 Chartiers Avenue
Pittsburgh (Elliott), Pa.
DRILLING CONTRACTORS

"It's the payload that pays"—Increase it with Utility trailers
Eleven years' experience and now offering



**SEMI, TANK, POLE, DROP-
FRAME, and FOUR-WHEEL
TRAILERS**

Utility Trailer Works, Inc.
Montgomery, Ala.
The pioneer trailer builder of
the South

Established 1881 FROEHLING AND ROBERTSON, INC.

Inspection Engineers and Chemists
Inspection of Cement, Steel, Pipe, Timber, Brick, Tile
Design and Control of Asphalt and Concrete Mixture
Water Analysis a Specialty.

RICHMOND NEW YORK CITY

MOTT CORE DRILLING COMPANY

Diamond Core Drill Contractors

We Test Coal, Clays and Mineral Properties, Foundation Testing, Dams,
Bridges, Buildings, Wash Borings, Dry Samples.

MAIN OFFICE HUNTINGTON, W. VA.

"GREAT DANE" TRAILERS

Are Built to GIVE
Service, Not to
Require IT



THE Steel Products Co., INC. LATHROP AVE.,
SAVANNAH, GA.

YANCEY BROTHERS, INC.

Headquarters for Contractors' Equipment, Road Building Machinery, Power
Farm Implements

"Caterpillar" Diesel Power Units.

"Caterpillar" Tractors, Blaw-Knox Forms, Bins, Ingersoll-Rand Compress-
Graders, Road Mach. Buckets, Batchers, sors, Tools, Steel
Ref. Pavers, Mixers, Buffalo-Springfield Road
Pumps, Saw Rigs, Red Edge Shovels, Picks, Rollers.
P. & H. Cranes, Shovels, Barber-Greene Ditchers, Hvas Asphalt Distribu-
Draglines, Conveyors, Loaders, tions, Sweepers, Flushers.
Littleford Asphalt Tools, Red Star Wheelbarrows, Killefer Road Rippers.
634 Whitehall St., S. W., ATLANTA, GA.
CALL LONG DISTANCE MAIN 3964

FREDERICK SNARE CORPORATION

Harbor Works
Bridges
Railroads
Railroad Terminals
Warehouses

CONTRACTING ENGINEERS

Difficult and unusual foundation and engineering problems a specialty

114 Liberty Street, New York

Philadelphia, Pa.; Havana, Cuba; Lima, Peru; Cartagena, Colombia

Industrial Plants
Sugar Mills
Power Plants, Dams,
Reservoirs, Pipe Lines,
Tanks.

[illegible]

RYERSON STEEL-SERVICE

Immediate shipment of steel and allied products including Bars, Structural, Sheets, Shafting, Alloy Steel, Stainless Steel, Welding Rod, Boiler Tubes, Bolts, Nails, Brass, Copper, Babbitt Metal, Tools, etc. Write for Stock List. Joseph T. Ryerson & Son, Inc., Chicago, Milwaukee, St. Louis, Cincinnati, Detroit, Cleveland, Buffalo, Boston, Philadelphia, Jersey City.

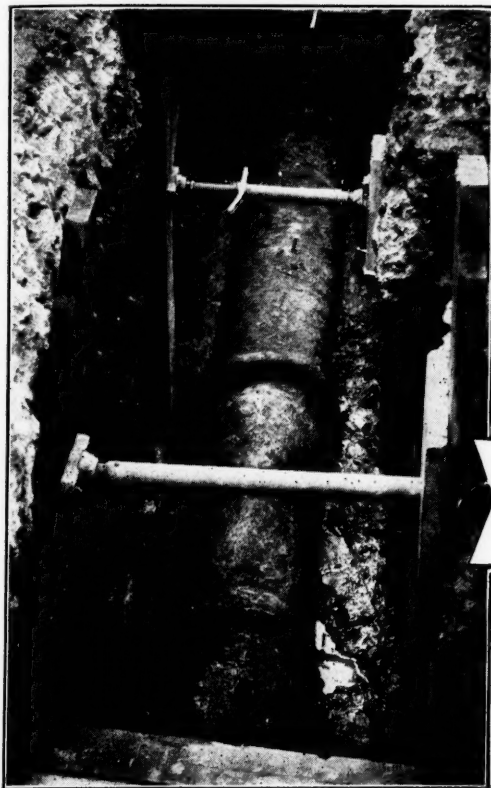
CANNING MACHINERY

**For Fruits, Vegetables,
Seafoods, etc.**

WE ARE MANUFACTURERS

— WRITE FOR CATALOG —

A. K. ROBINS & COMPANY, Inc.
BALTIMORE, MD.



Chicago laid this cast iron pipe in 1851, the year the first through train arrived from the East.

Good for more Service *after 83 years*

The rugged old cast iron pipe shown above, part of Chicago's original water line laid in 1851, was recently inspected and found in good condition. Part of this 83-year-old original line is still in service in State Street, the heart of Chicago's retail district. Over 80 per cent of the original pipe is still in service. Chicago's entire distribution system consists, as it always has, of nothing but cast iron pipe.

In older cities of Europe and the United States, cast iron mains still in use, after serving 100 to 200 years and longer, were recently uncovered and inspected. All were in satisfactory condition for further service. Thus,

evidence accumulates to prove that the useful life of cast iron pipe is *more than a century*.

The reason for the long life and low maintenance cost of cast iron pipe is its effective resistance to rust. Cast iron is the one ferrous metal for water and gas mains, and for sewer construction, that will not disintegrate from rust. This characteristic makes cast iron pipe the most practicable for underground mains since rust will not destroy it.

For further information address The Cast Iron Pipe Research Association, Thomas F. Wolfe, Research Engineer, 309 Peoples Gas Building, Chicago, Illinois.

Methods of evaluating bids now in use by engineers rate the useful life of cast iron pipe at 100 years

CAST IRON PIPE

Look for this



trade-mark

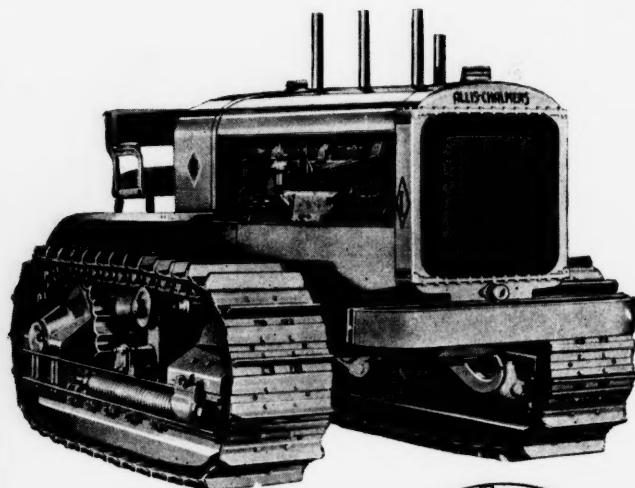
Certainly..

THE A-C OIL TRACTOR USES LOW COST FUEL

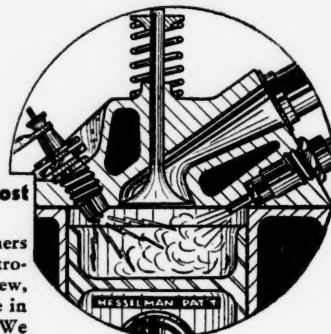
AND...

it is the only tractor today that
ANSWERS "*Yes*" TO ALL FIVE

- 1 ✓ LOW FUEL COST
- 2 ✓ LOWER ORIGINAL COST
- 3 ✓ LOWER MAINTENANCE
- 4 ✓ LESS DEPRECIATION
- 5 ✓ LOWEST FINAL COST



THE "LO"
OIL TRACTOR



Lowest Final Cost Because

In the Allis-Chalmers Oil Tractors, we introduce an entirely new, successful principle in tractor engines. We use a Diesel fuel pump to inject the measured charge of fuel oil into the combustion chamber and ignite it with a spark. We do not depend upon compression for ignition, but use the time tried magneto. This engine operates with less maintenance cost, because the internal pressures are less than one-third those used in the compression type.

Sure... the Allis-Chalmers Oil Tractor burns low cost fuel. But it doesn't stop there... it "goes all the way" in cutting costs... by meeting ALL the requirements of low cost operation. In terms of work accomplished—such as yards of dirt at the dump or miles of road built—it is the most economical tractor on the market today.

• Write for further information.

Track-Type Tractors . . Wheel-Type Tractors . . Oil Tractors
. . Power and Hand Controlled Graders . . Elevating Graders
. . Speed Patrol Graders . . Track Wagons . . Wagon Tracks.

ALLIS-CHALMERS

TRACTOR DIVISION—MILWAUKEE, U. S. A.

